FUJINON
FUJIFILM

CCTV LENS

Ver.5.3 2009.03

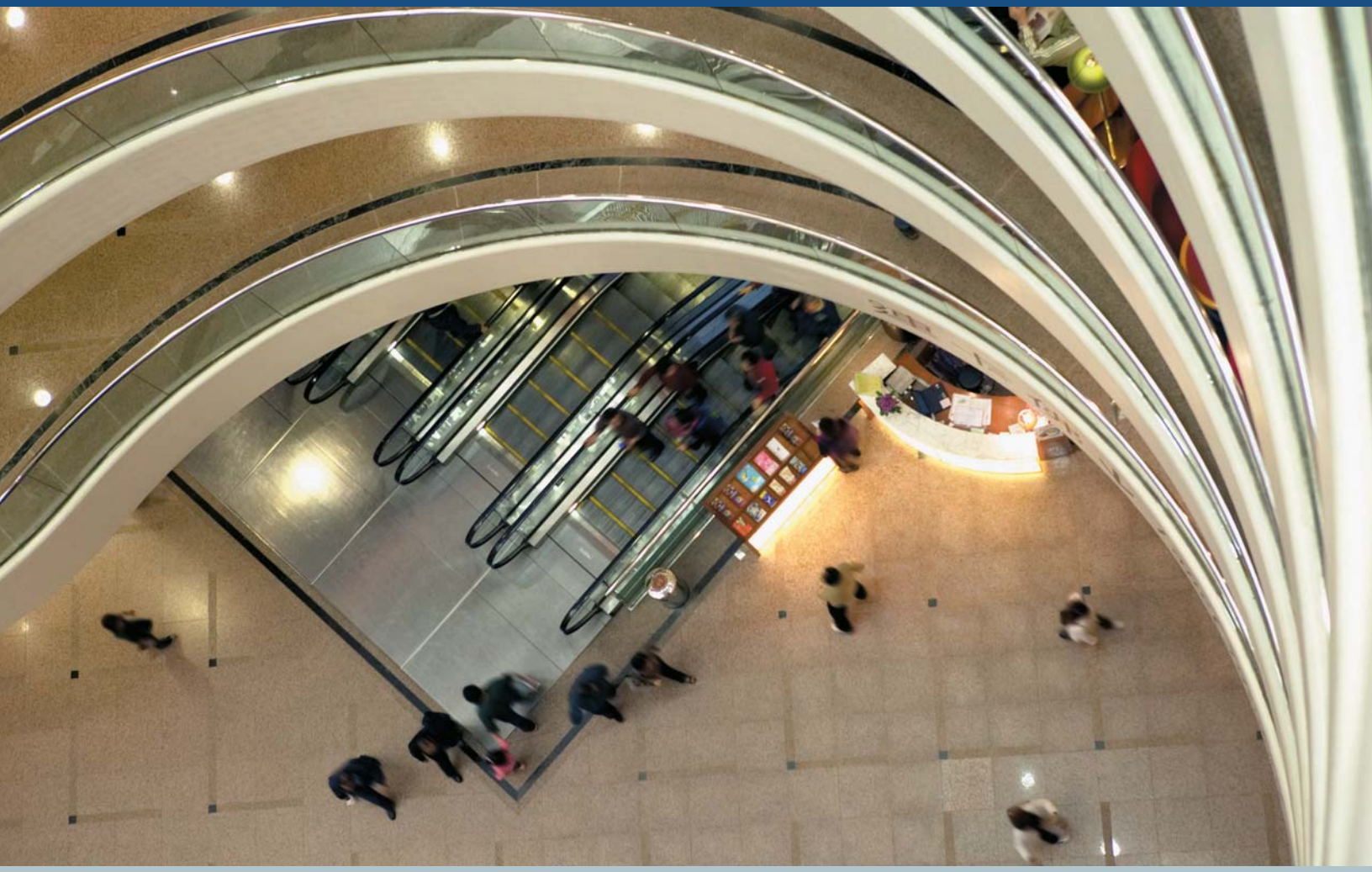
Fish-Eye Lens
Fixed Focal Lens
Vari-Focal Lens
Zoom Lens
Megapixel Lens
Day&Night Lens
3CCD Camera Lens

for Security

for Surveillance

for FA/Machine Vision

FUJINON CCTV LENS



For the safety and security of diversifying lifestyles

Identification 24/7

With the progress of modern civilization, society is shifting towards an around-the-clock structure. With business operating in a 24/7 capacity, our lifestyles have changed and diversified considerably, sometimes unmanned. In a rapidly changing society, the demand for crime-prevention security systems is growing each year, as is the demand for higher quality camera systems capable of handling diverse and complex crisis management. Naturally, lens products demand higher resolution and adaptability. Monitoring for safety purposes is no longer enough. Absolute “clarity” for identification of individuals from the captured images has now become essential.

Fujinon has top market share in the broadcasting lens market, in which superior quality is demanded. With over 50 years experience in the manufacturing of high-resolution lenses, Fujinon has developed a full line of high-precision CCTV lenses. We offer a large array of products including high magnification zoom lens for surveillance application, aspherical technology featured security lenses, and high-precision Factory Automation lenses that are 3CCD and megapixel supported. Our effective system of quality management and cost reduction enables Fujinon to produce cost effective, highly acclaimed products that offer the difference between “observation” and “identification”.

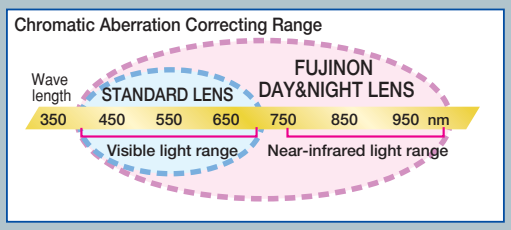
Fujinon CCTV Lenses

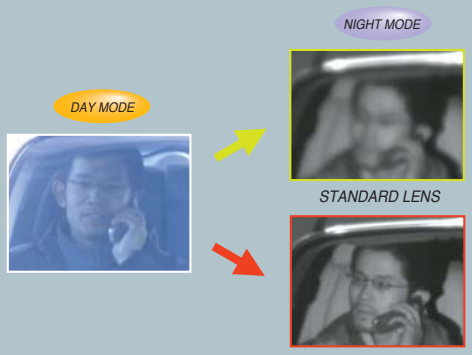
DAY&NIGHT LENS

VARI-FOCAL LENS and TELEPHOTO ZOOM LENS

There is a growing need for compact, high quality lenses for 24/7 surveillance applications such as parking lots, factory premises, streets.
Continuous surveillance is also required for public facilities such as airports, harbors and border patrol, requiring more versatile focal lengths and higher zoom ratios.
Fujinon has developed lenses that respond to infrared illumination to capture clear, corrected images, even at 0 lux. We offer a lineup of lenses from the standard focal length of 2.9-8mm, to the diverse focal length of 12.5-2200mm.

At night, day&night cameras operate in the near-infrared range. For this reason, use of regular lenses causes the image to be out of focus. Using special optical glass and advanced optical designing technology, Fujinon's day&night lenses achieve minimal axial aberration. Sharp and high quality images can be captured around-the-clock, whether in the visible range (day / color) or in the near-infrared range (night / monochrome), and at every focal distance from the wide end to the tele end.





For FA/Machine Vision

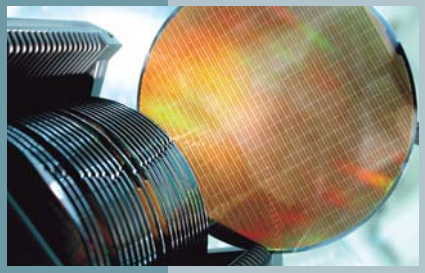
5 Megapixel Support, 2/3" Format

1.5 Megapixel Support, 1" Format

1.5 Megapixel Support, 2/3"~1/2" Format

FIXED FOCAL LENGTH LENS

The recent trend for cameras in the FA/machine vision industry has been towards higher pixel count. At Fujinon, we have developed a lineup of new fixed focal lenses, consisting of six 2/3" format lenses supporting up to 5 megapixel, and six 1" format lenses supporting up to 1.5 megapixel. With these lenses, in addition to the eight compact 2/3" format lenses supporting up to 1.5 megapixel, we aim to satisfy the diversifying needs of our customers.



3CCD CAMERA LENS

3CCD camera lenses are used by security and disaster surveillance, inspections, surveying, assembly line monitoring, image processing and image analysis. We have lined our products from fixed focal cameras to zoom lenses. If lenses for normal single CCD cameras are installed on 3CCD cameras, optimal performance of the optical color separation system in these cameras cannot be guaranteed. It is thus advisable to install lenses exclusively constructed for 3CCD cameras.

For Security & Surveillance

SUPER WIDE FISH-EYE LENS

Fujinon's super wide Fish-Eye lens, with an angle of 185 degrees, is the world's first to support 5 megapixel CCD cameras. High-quality image display in imaging software has been made simple with captured images that are sharp from edge to edge, and with the adoption of the f-theta system suited for uniform displaying of images.Look no further for effective, blindspot-free wide-area surveillance, such as of subway entrances and shopping arcades.

FIXED FOCAL LENGTH LENS

Both high-quality, cost effective and reductions in size and weight are realized in Fujinon's fixed focal-length lenses.
These lenses will play an important role at bank ATMs, convenience stores, offices and apartment buildings, and for all kinds of security transport.

MEGAPIXEL VARI-FOCAL LENS

We have completed development of megapixel lens series for security use that have high resolving power even in the peripheral part of the lens.
Based on the performance, use and installation site of a camera 3 and 1.3 Megapixel types in 1/2" and 1/3" day and Day&Night models are available.

VARI-FOCAL LENS

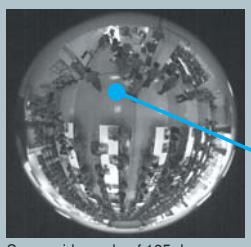
Using AT aspheric technology as a base, we have continually raised standards. An epitome of this is our F0.95 wide aperture, designed for 24-hour usage and compact design supporting dome applications.
1/2 lenses series for advanced optical performance are also available.

ZOOM LENS

With the adoption of high-precision TRI-CAM + INNERCAM technology, Fujinon meets ever more diversified needs with this expanded lineup of products, from the longest focal-length lens (2200 mm) to the compact, lightweight, low-cost lens (8x magnification). Models featuring zoom focus preset and the RS-232C compatible model are also available.

TELEPHOTO ZOOM LENS

There is increasing importance for surveillance in facilities such as petrochemical complexes, power plants. Fujinon has combined the zoom ratio of 60x for surveillance lenses, with the focal length of 1,500mm, the world's longest for night lenses. The small size and light weight of our lenses make them ideal for compact surveillance systems.



Super wide angle of 185 degrees
for sharp image quality in all directions.

Easy image conversion by software.
(Software is provided by other sources)

Focal Length

1.4mm 3.1mm 10mm 20mm 50mm 200mm 500mm 1100mm

Zoom Ratio

2.2x 2.8x 3.3x 4.3x 5x 8x 10x 12x 22x 32x 55x 60x

Fish-Eye Lens & Fixed Focal Lens

Megapixel Vari-Focal Lens

Vari-Focal Lens

Zoom Lens

Telephoto Zoom Lens

1500*

2200*

1500*

*Focal length will be 2X when extender is used.

Security

Surveillance

For Security

A FISH-EYE LENSES

Fish-Eye | Image circle | C mount
FE | 185 | C*** | H – 1
Angle of view | Megapixel

Type	Applicable Camera (1 / 2/3 / 1/2 / 1/3 / 1/4)	Focal Length (mm)	Zoom Ratio	Iris Range	M.O.D. (m)	Mount	Mass (g)	Remarks	Product Name	Ref. Page
Manual Iris	1/2 ~ 1	1.4	—	F1.4~F16	0.1	C	140		FE185C046HA-1	A-1 Upper half
	2/3 ~ 1/2	1.8	—	F1.4~F16	0.1	C	135		FE185C057HA-1	A-1 Lower half
	1 ~ 2/3	2.7	—	F1.8~F16	0.2	C	160		FE185C086HA-1	A-2 Upper half
	1/3 ~ 1/4	1.4~3.1	2.2	F1.4~C	0.2	CS	70		YV2.2X1.4A-2	D-1
Auto Iris (DC Type)	1/3 ~ 1/4	1.4~3.1	2.2	F1.4~T360	0.2	CS	80	*2	YV2.2X1.4A-SA2	D-9

*2 Iris control cable length : Standard type / 130mm, Long cable type / 230mm

B FIXED FOCAL LENGTH LENSES

Image size:1/3" | Focal length | Operating system, etc.: DC Auto Iris, CS Mount
Y | F | 2.8 | * – SA2 | *
Fixed focal

Type	Applicable Camera (1 / 2/3 / 1/2 / 1/3 / 1/4)	Focal Length (mm)	Zoom Ratio	Iris Range	M.O.D. (m)	Mount	Mass (g)	Remarks	Product Name	Ref. Page
Manual Iris	1/3 ~ 1/4	2.8	—	F1.3~C	0.1	CS	40		YF2.8A-2	B-1 Upper half
	1/3 ~ 1/4	4	—	F1.2~C	0.1	CS	30		YF4A-2	B-1 Lower half
	1/3 ~ 1/4	8	—	F1.2~C	0.1	CS	30		YF8A-2	B-2 Upper half
	1/3 ~ 1/4	16	—	F1.4~C	0.5	CS	25		YF16A-2	B-2 Lower half
Auto Iris (DC Type)	1/3 ~ 1/4	2.8	—	F1.3~T360	0.1	CS	50	*1	YF2.8A-SA2B	B-3 Upper half
	1/3 ~ 1/4	4	—	F1.2~T360	0.1	CS	40	*1	YF4A-SA2B	B-3 Lower half
	1/3 ~ 1/4	8	—	F1.2~T360	0.1	CS	40	*1	YF8A-SA2B	B-4 Upper half
	1/3 ~ 1/4	16	—	F1.4~T360	0.5	CS	35	*1	YF16A-SA2B	B-4 Lower half

*1 Iris control cable length : Standard type / 100mm, Long cable type / 230mm

Image size: Y 1/3", D 1/2" | Vari-focal | Focal length at the wide end | 3 Megapixel Support | Operating system, etc.: DC Auto Iris, SA1:C Mount, SA2:CS Mount
Y | V | 2.8 / 2.1 × 2.8 | SA / H | R4 | * – SA2
Zoom ratio | 1.3Megapixel Support | Day&Night lens

C MEGAPIXEL VARI-FOCAL LENSES

Type	Applicable Camera (1 / 2/3 / 1/2 / 1/3 / 1/4)	Focal Length (mm)	Zoom Ratio	Iris Range	M.O.D. (m)	Mount	Mass (g)	Remarks	Product Name	Ref. Page	
3 Megapixel Support Manual Iris	1/3 ~ 1/4	2.2~6	2.7	F1.3~C	0.3	CS	55		YV2.7X2.2SA-2	C-1	New!
	1/3 ~ 1/4	2.8~8	2.8	F1.2~C	0.3	CS	50		YV2.8X2.8SA-2	C-2	New!
	1/3 ~ 1/4	2.8~12	4.3	F1.4~C	0.3	CS	80		YV4.3X2.8SA-2	C-3	New!
	1/3 ~ 1/4	15~50	3.3	F1.5~C	0.8	CS	60		YV3.3X15SA-2	C-4	New!
	1/2 ~ 1/4	3.8~13	3.4	F1.4~C	0.3	C	80		DV3.4X3.8SA-1	C-5	New!
3 Megapixel Support Auto Iris (DC Type)	1/3 ~ 1/4	2.8~6	2.1	F1.3~T360	0.3	CS	55	*1	YV2.1X2.8SR4A-SA2	C-6	New!
	1/3 ~ 1/4	2.2~6	2.7	F1.3~T360	0.3	CS	55	*1	YV2.7X2.2SA-SA2	C-7	New!
	1/3 ~ 1/4	2.8~8	2.8	F1.2~T360	0.3	CS	50	*1	YV2.8X2.8SA-SA2	C-8	
	1/3 ~ 1/4	2.8~12	4.3	F1.4~T360	0.3	CS	80	*1	YV4.3X2.8SA-SA2	C-9	
	1/3 ~ 1/4	15~50	3.3	F1.5~T360	0.8	CS	60	*1	YV3.3X15SA-SA2	C-10	
	1/2 ~ 1/4	3.8~13	3.4	F1.4~T360	0.3	C	80	*1	DV3.4X3.8SA-SA1	C-11	New!
1.3 Megapixel Support Manual Iris	1/3 ~ 1/4	5~50	10	F1.6~C	0.3	CS	80		YV10X5HR4A-2	C-12	
1.3 Megapixel Support Auto Iris (DC Type)	1/3 ~ 1/4	15~50	3.3	F1.5~T360	0.8	CS	50	*1	YV3.3X15HR4A-SA2	C-13	New!
	1/3 ~ 1/4	5~50	10	F1.6~T360	0.3	CS	85	*1	YV10X5HR4A-SA2	C-14	

*1 Iris control cable length : Standard type / 100mm, Long cable type / 230mm * YV3.3 x 15HR4A-SA2 is available only in standard cable type.

D VARI-FOCAL LENSES

Image size: Y 1/3", D 1/2" — Vari-focal: V — Zoom ratio: 5 — Focal length at the wide end: 3.6 — Day&Night lens: R4 — Operating system, etc.: SA2 (DC Auto Iris, CS Mount)

Type	Applicable Camera (1 / 2/3 / 1/2 / 1/3 / 1/4)	Focal Length (mm)	Zoom Ratio	Iris Range	M.O.D. (m)	Mount	Mass (g)	Remarks	Product Name	Ref. Page
Manual Iris	1/4	1.4～3.1	2.2	F1.4～C	0.2	CS	70		YV2.2×1.4A-2	D-1
	1/4	2.5～6	2.4	F1.2～T360・C	0.3	CS	30		YV2.4×2.5A-2	D-2
	1/4	2.9～8	2.7	F0.95～T360・C	0.3	CS	35		YV2.7×2.9LR4D-2	D-3
	1/4	2.8～8	2.8	F0.95～T360・C	0.3	CS	35		YV2.8×2.8LA-2	D-4
	1/4	2.7～13.5	5	F1.3～T360・C	0.3	CS	65		YV5×2.7R4B-2	D-5
	1/4	5～50	10	F1.3～T360・C	0.3	CS	95		YV10×5B-2	D-6
	1/3	3.6～18	5	F1.8～T360・C	0.3	CS	65		DV5×3.6R4B-2	D-7
	1/3	7～70	10	F1.8～T360・C	0.3	CS	95		DV10×7B-2	D-8
Auto Iris (DC Type)	1/4	1.4～3.1	2.2	F1.4～T360	0.2	CS	80	＊2	YV2.2×1.4A-SA2	D-9
	1/4	2.5～6	2.4	F1.2～T360	0.3	CS	45	＊1	YV2.4×2.5A-SA2	D-10
	1/4	2.9～8	2.7	F0.95～T360	0.3	CS	45	＊1	YV2.7×2.9LR4D-SA2	D-11
	1/4	2.8～8	2.8	F0.95～T360	0.3	CS	45	＊1	YV2.8×2.8LA-SA2	D-12
	1/4	2.7～13.5	5	F1.3～T360	0.3	CS	70	＊1	YV5×2.7R4B-SA2	D-13
	1/4	5～50	10	F1.3～T360	0.3	CS	100	＊1	YV10×5B-SA2	D-14
	1/3	3.6～18	5	F1.8～T360	0.3	CS	75	＊1	DV5×3.6R4B-SA2	D-15
	1/3	7～70	10	F1.8～T360	0.3	CS	100	＊1	DV10×7B-SA2	D-16

＊1 Iris control cable length：Standard type / 100mm, Long cable type / 230mm ＊2 Iris control cable length：Standard type / 130mm, Long cable type / 230mm

E ZOOM LENSES

Image size: Y 1/3", D 1/2" — Focal length at the wide end: 8 — Zoom ratio: 7.8 — H — Operating system, etc.: SE2

- SE2 DC Auto iris. Motor-driven zoom/focus. Drive voltage: 6V, ±6V, 12V, ±12V.
- YE2 With SE2-type potentiometer.
- V42 Video Auto iris. Motor-driven zoom/focus. With potentiometer. Drive voltage: 6V, ±6V, 12V, ±12. Iris-Remote switching.

Type	Applicable Camera (1 / 2/3 / 1/2 / 1/3 / 1/4)	Focal Length (mm)	Zoom Ratio	Iris Range	M.O.D. (m)	Mount	Mass (g)	Remarks	Product Name	Ref. Page
Motor Drive Auto Iris (DC Type)	1/4	6～72	12	F1.5～T400	1.3	CS	330		Y12×6A-SE2	E-1
	1/4	6～72	12	F1.5～T400	1.3	CS	350	＊3	Y12×6A-YE2	E-2
	1/2	7.8～63	8	F1.2～T400	1.2	CS	400		D8×7.8HA-SE2	E-3
	1/2	7.8～63	8	F1.2～T400	1.2	CS	400	＊3	D8×7.8HA-YE2	E-4
	1/3	8～96	12	F2.0～T400	1.3	CS	330		D12×8A-SE2	E-5
	1/3	8～96	12	F2.0～T400	1.3	CS	350	＊3	D12×8A-YE2	E-6
(Video Type)	1/2	7.8～63	8	F1.2～T400	1.2	CS	400	＊3	D8×7.8HA-V42	E-7

＊3 Preset type available *D8×7.8HA-SE2/YE2/V42: 1.3 megapixel support

DAY&NIGHT LENSES

Please refer to the vari-focal lenses and telephoto zoom lenses sections for explanation of the model name.

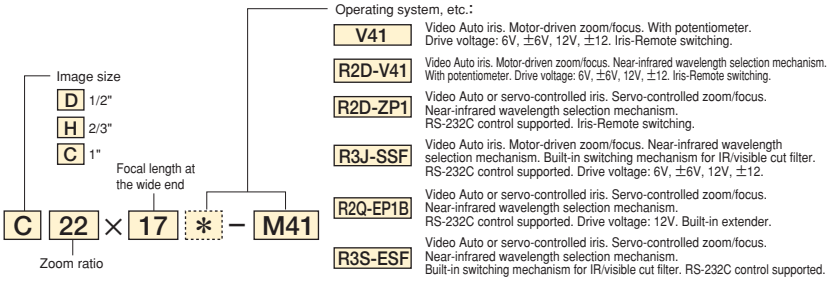
Type	Applicable Camera (1 / 2/3 / 1/2 / 1/3 / 1/4)	Focal Length (mm)	Zoom Ratio	Iris Range	M.O.D. (m)	Mount	Mass (g)	Remarks	Product Name	Ref. Page
Vari-Focal Manual Iris	1/4	2.9～8	2.7	F0.95～T360・C	0.3	CS	35		YV2.7×2.9LR4D-2	D-3
	1/4	2.7～13.5	5	F1.3～T360・C	0.3	CS	65		YV5×2.7R4B-2	D-5
	1/2	5～50	10	F1.6～T360・C	0.3	CS	80		YV10×5HR4A-2	C-12
	1/3	3.6～18	5	F1.8～T360・C	0.3	CS	65		DV5×3.6R4B-2	D-7
Vari-Focal Auto Iris (DC Type)	1/4	2.8～6	2.1	F1.3～T360	0.3	CS	55	＊1	YV2.1×2.8SR4A-SA2	C-6
	1/4	2.9～8	2.7	F0.95～T360	0.3	CS	45	＊1	YV2.7×2.9LR4D-SA2	D-11
	1/2	15～50	3.3	F1.5～T360	0.8	CS	50	＊1	YV3.3×15HR4A-SA2	C-13
	1/4	2.7～13.5	5	F1.3～T360	0.3	CS	70	＊1	YV5×2.7R4B-SA2	D-13
	1/2	5～50	10	F1.6～T360	0.3	CS	85	＊1	YV10×5HR4A-SA2	C-14
	1/3	3.6～18	5	F1.8～T360	0.3	CS	75	＊1	DV5×3.6R4B-SA2	D-15

＊1 Iris control cable length：Standard type / 100mm, Long cable type / 230mm
*YV2.1×2.8SR4A-SA2: 3 megapixel support *YV10×5HR4A-2/SA2, YV3.3×15HR4A-SA2: 1.3 megapixel support

Type	Applicable Camera (1 / 2/3 / 1/2 / 1/3 / 1/4)	Focal Length (mm)	Zoom Ratio	Iris Range	M.O.D. (m)	Mount	Mass (kg)	Remarks	Product Name	Ref. Page
Telephoto Long Focal Length		10～320	32	F2.5～T1500	3	C	2.5	＊3	D32×10HR4D-V41	F-6
		10～320	32	F2.5～T1500	3	C	2.5	＊3	D32×10HR4D-YE1	F-7
		12.5～750 25～1500 (×2)	60	F3.8～T3000 F7.6～T3000 (×2)	5	C	5.2	＊3 ＊9 ＊10	D60×12.5R3DE-V41	F-22
		12.5～750 25～1500 (×2)	60	F3.8～T3000 F7.6～T3000 (×2)	5	C	5.2	＊9 ＊10	D60×12.5R3DE-ZP1	F-23
		11.5～253	22	F1.6～T2000	3	C	2.5	＊3 ＊10	H22×11.5R2D-V41	F-10
		11.5～253	22	F1.6～T2000	3	C	2.5	＊10	H22×11.5R2D-ZP1	F-11
		17～374	22	F2.3～T3000	3	C	2.3	＊3 ＊10	C22×17R2D-V41	F-14
		17～374	22	F2.3～T3000	3	C	2.7	＊10	C22×17R3J-SSF	F-15
		23～506	22	F3.1～T3000	3	C	2.4	＊3 ＊10	C22×23R2D-V41	F-19
		23～506	22	F3.1～T3000	3	C	2.4	＊10	C22×23R2D-ZP1	F-20
		13.5～750 27～1500 (×2)	55	F2.1～T1500 F4.2～T3000 (×2)	2.4	C	20	＊9 ＊10 ＊11	C55×13.5R2Q-EP1B	F-25
		13.5～750 27～1500 (×2)	55	F2.1～T1500 F4.2～T3000 (×2)	2.4	C	21	＊9 ＊10	C55×13.5R3S-ESF	F-26

＊3 Preset type available　＊9 Built-in extender　＊10 With near-infrared wavelength selection mechanism　＊11 Stabilize adapter type available
*D32×10HR4D-V41/YE1: 1.3 megapixel support

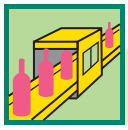
For Surveillance


Operating system, etc.:
Image size
D 1/2"
H 2/3"
C 1"
Focal length at the wide end
C 22 × 17 ＊ – M41
Zoom ratio
V41
Video Auto iris. Motor-driven zoom/focus. With potentiometer. Drive voltage: 6V, ±6V, 12V, ±12. Iris-Remote switching.
R2D-V41
Video Auto iris. Motor-driven zoom/focus. Near-infrared wavelength selection mechanism. With potentiometer. Drive voltage: 6V, ±6V, 12V, ±12. Iris-Remote switching.
R2D-ZP1
Video Auto or servo-controlled iris. Servo-controlled zoom/focus. Near-infrared wavelength selection mechanism. RS-232C control supported. Iris-Remote switching.
R3J-SSF
Video Auto iris. Motor-driven zoom/focus. Near-infrared wavelength selection mechanism. Built-in switching mechanism for IR/visible cut filter. RS-232C control supported. Drive voltage: 6V, ±6V, 12V, ±12.
R2Q-EP1B
Video Auto or servo-controlled iris. Servo-controlled zoom/focus. Near-infrared wavelength selection mechanism. RS-232C control supported. Drive voltage: 12V. Built-in extender.
R3S-ESF
Video Auto or servo-controlled iris. Servo-controlled zoom/focus. Near-infrared wavelength selection mechanism. Built-in switching mechanism for IR/visible cut filter. RS-232C control supported.

F TELEPHOTO ZOOM LENSES

Type	Applicable Camera (1 / 2/3 / 1/2 / 1/3 / 1/4)	Focal Length (mm)	Zoom Ratio	Iris Range	M.O.D. (m)	Mount	Mass (kg)	Remarks	Product Name	Ref. Page
Motor Drive Remote Iris		11.5～253	22	F1.6～F22・C	3	C	2.3		H22×11.5A-M41	F-1
		17～374	22	F2.3～F22・C	3	C	2.3		C22×17A-M41	F-2
		23～506	22	F3.1～F22・C	3	C	2.4		C22×23A-M41	F-3
Motor Drive Auto Iris (Video Type)		9.1～200	22	F1.2～T1500	3	C	2.3		D22×9.1B-S41	F-4
		9.1～200	22	F1.2～T1500	3	C	2.3	＊3	D22×9.1B-Y41	F-5
		10～320	32	F2.5～T1500	3	C	2.5	＊3	D32×10HR4D-V41	F-6
		10～320	32	F2.5～T1500	3	C	2.5	＊3	D32×10HR4D-YE1	F-7
		11.5～253	22	F1.6～T2000	3	C	2.3		H22×11.5B-S41	F-8
		11.5～253	22	F1.6～T2000	3	C	2.3	＊3	H22×11.5B-Y41	F-9
		11.5～253	22	F1.6～T2000	3	C	2.5	＊3 ＊10	H22×11.5R2D-V41	F-10
		11.5～253	22	F1.6～T2000	3	C	2.5	＊10	H22×11.5R2D-ZP1	F-11
		17～374	22	F2.3～T3000	3	C	2.5		C22×17B-S41	F-12
		17～374	22	F2.3～T3000	3	C	2.5	＊3	C22×17B-Y41	F-13
		17～374	22	F2.3～T3000	3	C	2.3	＊3 ＊10	C22×17R2D-V41	F-14
		17～374	22	F2.3～T3000	3	C	2.7	＊10	C22×17R3J-SSF	F-15
		23～506	22	F3.1～T3000	3	C	2.4		C22×23B-S41	F-16
		23～506	22	F3.1～T3000	3	C	2.4	＊3	C22×23B-Y41	F-17
		23～506	22	F3.1～T3000	3	C	2.4	＊3	C22×23B-V41	F-18
		23～506	22	F3.1～T3000	3	C	2.4	＊3 ＊10	C22×23R2D-V41	F-19
		23～506	22	F3.1～T3000	3	C	2.4	＊10	C22×23R2D-ZP1	F-20
Telephoto Long Focal Length		12.5～750 25～1500 (×2)	60	F3.8～T3000 F7.6～T3000 (×2)	5	C	5.1	＊3 ＊9	D60×12.5BE-V41	F-21
		12.5～750 25～1500 (×2)	60	F3.8～T3000 F7.6～T3000 (×2)	5	C	5.2	＊3 ＊9 ＊10	D60×12.5R3DE-V41	F-22
		12.5～750 25～1500 (×2)	60	F3.8～T3000 F7.6～T3000 (×2)	5	C	5.2	＊9 ＊10	D60×12.5R3DE-ZP1	F-23
		13.5～750 27～1500 (×2)	55	F2.1～T1500 F4.2～T3000 (×2)	2.4	C	20	＊9 ＊11	C55×13.5P-EP1B	F-24
		13.5～750 27～1500 (×2)	55	F2.1～T1500 F4.2～T3000 (×2)	2.4	C	20	＊9 ＊10 ＊11	C55×13.5R2Q-EP1B	F-25
		13.5～750 27～1500 (×2)	55	F2.1～T1500 F4.2～T3000 (×2)	2.4	C	21	＊9 ＊10	C55×13.5R3S-ESF	F-26
System Chart										F-27

＊3 Preset type available　＊9 Built-in extender　＊10 With near-infrared wavelength selection mechanism　＊11 Stabilize adapter type available
*D32×10HR4D-V41/YE1: 1.3 megapixel support



For FA/Machine Vision

Image size: D 1/2" / H 2/3" / C 1" — Focal length — Fixed focal — Megapixel Support: HA-1 (B) 1.5 megapixel / SA-1 5 megapixel

H F 16 – SA-1

G FIXED FOCAL LENGTH LENSES

Type	Applicable Camera (1 / 2/3 / 1/2 / 1/3 / 1/4)	Focal Length (mm)	Zoom Ratio	Iris Range	M.O.D. (m)	Mount	Mass (g)	Remarks	Product Name	Ref. Page
5 Megapixel Support		12.5	—	F1.4～F22	0.1	C	295	＊1	HF12.5SA-1	G-1 Upper half
		16	—	F1.4～F22	0.1	C	285	＊1	HF16SA-1	G-1 Lower half
		25	—	F1.4～F22	0.1	C	315	＊1	HF25SA-1	G-2 Upper half
		35	—	F1.4～F22	0.2	C	185	＊1	HF35SA-1	G-2 Lower half
		50	—	F1.8～F22	0.4	C	240	＊1 ＊2	HF50SA-1	G-3 Upper half
		75	—	F1.8～F22	0.9	C	305	＊1 ＊3	HF75SA-1	G-3 Lower half
1.5 Megapixel Support		6	—	F1.2～F16	0.1	C	55	＊1	DF6HA-1B	G-4 Upper half
		9	—	F1.4～F16	0.1	C	55	＊1	HF9HA-1B	G-4 Lower half
		12.5	—	F1.4～F16	0.1	C	45	＊1	HF12.5HA-1B	G-5 Upper half
		16	—	F1.4～F16	0.1	C	45	＊1	HF16HA-1B	G-5 Lower half
		25	—	F1.4～F16	0.15	C	45	＊1	HF25HA-1B	G-6 Upper half
		35	—	F1.6～F22	0.25	C	45	＊1	HF35HA-1B	G-6 Lower half
		50	—	F2.3～F22	0.5	C	45	＊1	HF50HA-1B	G-7 Upper half
		75	—	F2.8～F22	1.1	C	55	＊1	HF75HA-1B	G-7 Lower half
		12.5	—	F1.4～F22	0.1	C	290	＊1	CF12.5HA-1	G-8 Upper half
		16	—	F1.4～F22	0.1	C	280	＊1	CF16HA-1	G-8 Lower half
		25	—	F1.4～F22	0.1	C	310	＊1	CF25HA-1	G-9 Upper half
		35	—	F1.4～F22	0.2	C	180	＊1	CF35HA-1	G-9 Lower half
		50	—	F1.8～F22	0.4	C	235	＊1 ＊2	CF50HA-1	G-10 Upper half
		75	—	F1.8～F22	0.9	C	300	＊1 ＊3	CF75HA-1	G-10 Lower half

＊1 With locking knob for iris and focus
＊2 Using an extension tube longer than 5mm the M.O.D. will increase to 0.3m
＊3 Using an extension tube longer than 5mm the M.O.D. will increase to 0.5m

H 3CCD CAMERA LENSES

Type	Applicable Camera (1 / 2/3 / 1/2 / 1/3 / 1/4)	Focal Length (mm)	Zoom Ratio	Iris Range	M.O.D. (m)	Mount	Mass (g)	Remarks	Product Name	Ref. Page
Fixed Focal Length Manual Iris		2.8	—	F2.2～F16・C	0.1	C	75		TF2.8DA-8	H-1
		4	—	F2.2～F16・C	0.1	C	70		TF4DA-8	H-2
		8	—	F2.2～F16・C	0.1	C	60		TF8DA-8B	H-3
		15	—	F2.2～F16・C	0.1	C	60		TF15DA-8	H-4
		25	—	F2.2～F16・C	0.2	C	60		TF25DA-8B	H-5

I Accessories

Type	Product Name	Specifications	Ref. Page
Extender	HE15-1	1.5× C Mount type	I-1 Upper half
	HE20-1	2× C Mount type	I-1 Lower half
Close-up Lens	CL3355	M55×0.75mm Focal Length 333mm Applicable Lens:Y12×6, D8×7.8, D12×8	I-2 Upper half
	CL10055	M55×0.75mm Focal Length 1000mm Applicable Lens：Y12×6, D8×7.8, D12×8	I-2 Upper half
Stabilize Adapter	TS-C11	Applicable Lens:C55×Series	I-2 Lower half
Control Unit	CRD-40	Zoom ：Speed Control Focus ：Position Control Iris ：Auto or Position Control Extender ：ON/OFF Control	F-27
Extension Cable	UHO-010-E	10m	F-27
	UHO-020-E	20m	F-27
	UHO-050-E	50m	F-27
	UHO-100-E	100m	F-27
	UHO-150-E	150m	F-27
Control Cable	CCM-010	10m	F-27
	CCM-020	20m	F-27
	CCM-050	50m	F-27
DC Power Source	CPS-10	Input ：AC 90V～250V, 50/60Hz Output ：DC 15V, 3.5A	F-27
AC Power Cord	PCA-1	Japan	F-27
	PCA-2	U.S.A./Canada	
	PCA-3	Continental Europe	
	PCA-4	Australia	
	PCA-5	Without AC Plug	
Lens Supporter	CLH-11	For C55×13.5, C55×20	F-27

Feature Indications

Lens Type

FIXED — Fixed Focal
High performance single focal lens for the best image quality

VARI — Vari-Focal
Variable magnification lens with manually controllable angle. It functions as if you have multiple fixed focal lenses.

ZOOM — Zoom
Zoom lens with the high performance cam adopted, which offers high quality smooth movements

Feature/Function

Fish-Eye 185° — Fish-Eye
Super wide angle lens realizing angle of 185 degrees

MOTOR DRIVE — Motor Drive
Enables the lens control from remote locations

TELE — Telephoto Long Focal
Telephoto lens with the ability to zoom

WIDE — Wide Angle
Wide angle lens which ensures wide field of view

Day~Night — Day & Night
Specially-designed lens supporting both visible light and near-infrared light to prevent out-of-focus of day & night cameras

1.5 Mega — For Megapixel Camera
High performance lens to achieve the optimum resolution of mega pixel cameras

3CCD — For 3CCD Camera
Lens exclusively for 3CCD cameras for the optimum color reproduction and high resolution of 3CCD cameras

Built-in — Built-in
Cast-in lens resulted from abolition of the standard mounting method, enabling the downsizing of your system

PRESET — Potentio Meter
Enables to preset the zoom, focus and iris positions of the zoom lens

N D — ND Filter
With the built-in ND filter, enables to optimize the brightness of the bright object in direct sunlight

2 x — Extender
Function to double the focal length by one-touch control

P C — PC Control
Enables the advanced control of zoom lens using a PC

230 — Long Cable
Cable length options provided to let you select the best-suited length for your camera

OS-TECH — Stabilize Adapter
High-intensity optical vibration isolation system, optimizing the image in any circumstances

SERVO — Full Servo
DC servo circuit enabling the smooth movement and accurate positioning

AT — Aspherical Lens
Adopts the aspheric lens technologies developed in the most advanced lenses for broadcasting

F0.95 — Wide Aperture Rate
Lens with the wide aperture rate, optimizing the sensitivity of cameras

Iris Type

MANUAL — Manual Iris
Manually-operated iris

REMOTE — Remote Iris
Motor-driven iris

D C — DC Auto Iris
Auto iris supporting DC-controlled cameras

VIDEO — Video Auto Iris
Auto iris supporting video-controlled cameras

IRIS-REMOTE — Iris-Remote
Allows switching between auto iris and remote iris

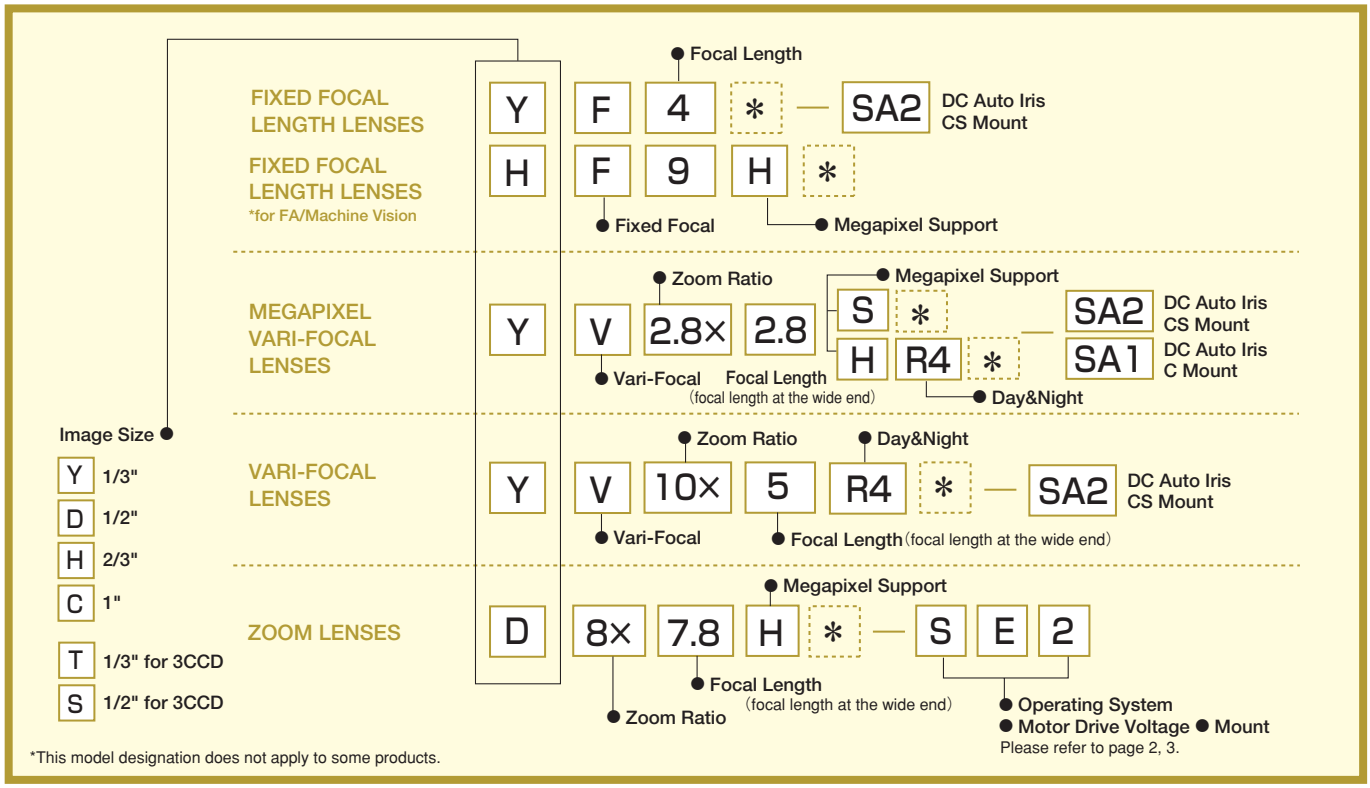
Mounting Type

C-mt — C Mount
Screw-in mounting commonly used in FA lenses

CS-mt — CS Mount
Screw-in mounting commonly used in security lenses

METAL — Metal Mount
Metal mounting with high accuracy and durability

Model Explanation



*This model designation does not apply to some products.

For Security Fish-Eye

FE185C046HA-1

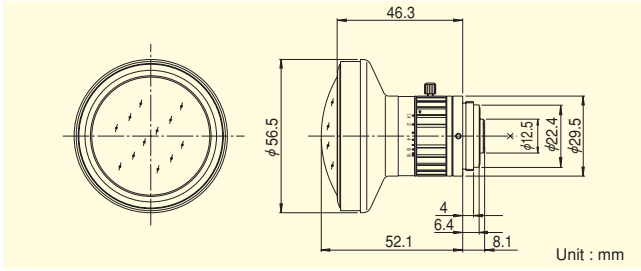
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | Fish-Eye 185° Fish-Eye | 5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

*Photograph is a similar model.

- High-resolution design, providing support for up to 5 megapixel camera resolution.
- Super wide angle of 185 degrees that eliminates dead angles and enables effective, wide-area surveillance.
- Designed with the f-theta system, most suited for uniform displaying of images. Allows high-quality image display, partial enlargement, and conversion to ordinary-looking images to be performed easily with imaging software.

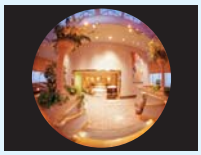


Unit : mm

Focal Length (mm)		1.4
Iris Range		F1.4 ~ F16
Operation	Focus	Fixed
	Iris	Manual
Angle Of View (H×V)	1/2"	185° × 185° (φ4.6mm)
	1/3"	185° × 144°47′
	1/4"	144°47′ × 108°35′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Back Focal Distance (in air) (mm)		9.70
Exit Pupil Position (From Image Plane) (mm)		−61
Filter Thread (mm)		—
Mount		C
Mass (g)		140
Remarks		・With Metal Mount ・With Locking Knob for Iris

[Fish-Eye Lens Image]

1/2"



1/3"

1/4"

For Security Fish-Eye

FE185C057HA-1

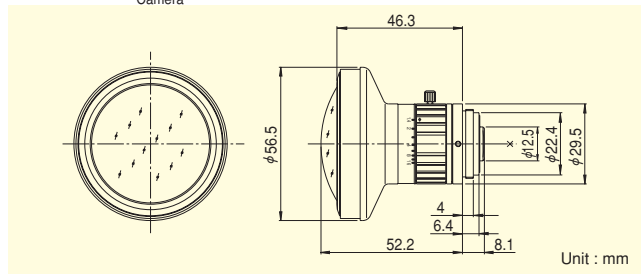
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | Fish-Eye 185° Fish-Eye | 5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

*Photograph is a similar model.

- High-resolution design, providing support for up to 5 megapixel camera resolution.
- Super wide angle of 185 degrees that eliminates dead angles and enables effective, wide-area surveillance.
- Designed with the f-theta system, most suited for uniform displaying of images. Allows high-quality image display, partial enlargement, and conversion to ordinary-looking images to be performed easily with imaging software.

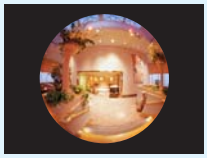


Unit : mm

Focal Length (mm)		1.8
Iris Range		F1.4 ~ F16
Operation	Focus	Fixed
	Iris	Manual
Angle Of View (H×V)	2/3"	185° × 185° (φ5.7mm)
	1/2"	185°01′ × 154°08′
	1/3"	154°08′ × 115°27′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Back Focal Distance (in air) (mm)		9.70
Exit Pupil Position (From Image Plane) (mm)		−61
Filter Thread (mm)		—
Mount		C
Mass (g)		135
Remarks		・With Metal Mount ・With Locking Knob for Iris

[Fish-Eye Lens Image]

2/3"



1/2"

1/3"

For Security
Fish-Eye

FE185C086HA-1

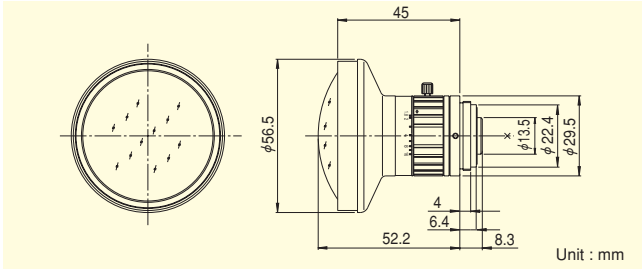
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | Fish-Eye 185° Fish-Eye | 5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

*Photograph is a similar model.

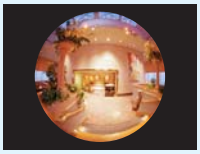
- High-resolution design, providing support for up to 5 megapixel camera resolution.
- Super wide angle of 185 degrees that eliminates dead angles and enables effective, wide-area surveillance.
- Designed with the f-theta system, most suited for uniform displaying of images. Allows high-quality image display, partial enlargement, and conversion to ordinary-looking images to be performed easily with imaging software.



Focal Length (mm)		2.7
Iris Range		F1.8 ~ F16
Operation	Focus	Fixed
	Iris	Manual
Angle Of View (H×V)	1"	185° × 185° (φ8.6mm)
	2/3"	185° × 140°35′
	1/2"	136°18′ × 102°19′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.2
Back Focal Distance (in air) (mm)		9.75
Exit Pupil Position (From Image Plane) (mm)		−49
Filter Thread (mm)		—
Mount		C
Mass (g)		160
Remarks		・With Metal Mount ・With Locking Knob for Iris

[Fish-Eye Lens Image]

1"



2/3"

1/2"

For Security
Fixed Focal

YF2.8A-2

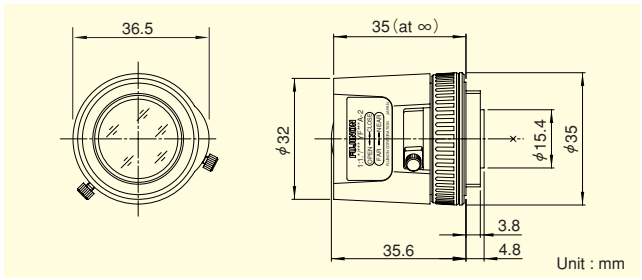
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | WIDE Wide Angle | MANUAL Manual Iris | CS-mt CS Mount | F1.3 Wide Aperture Rate

*Photograph is a similar model.

- Super wide angle lens with the horizontal field angle of 96 degrees or more (when used on 1/3" cameras).
- Compact and lightweight design of 40g, best suited for built-in lenses.
- Wide aperture of F1.3, optimizing the performance at low lighting intensity.



Focal Length (mm)		2.8
Iris Range		F1.3 ~ Close
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1/3"	96°15′ × 71°51′
	1/4"	71°51′ × 53°45′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	241 × 157
	1/4"	157 × 110
Back Focal Distance (in air) (mm)		8.11
Exit Pupil Position (From Image Plane) (mm)		166
Filter Thread (mm)		—
Mount		CS
Mass (g)		40
Remarks		

For Security
Fixed Focal

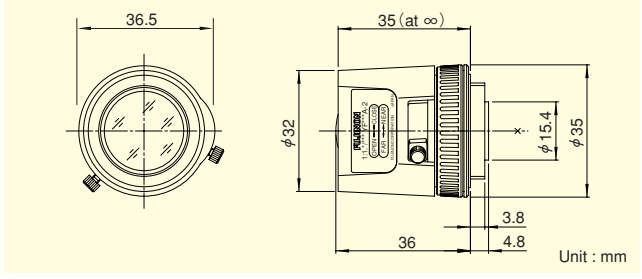
YF4A-2

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | MANUAL Manual Iris | CS-mt CS Mount | F1.2 Wide Aperture Rate

- Compact and lightweight design of 30g, best suited for built-in lenses.
- Wide aperture of F1.2, optimizing the performance at low lighting intensity.



Focal Length (mm)		4
Iris Range		F1.2 ~ Close
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1/3"	65°21′ × 49°27′
	1/4"	49°27′ × 37°15′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	132 × 99
	1/4"	99 × 73
Back Focal Distance (in air) (mm)		8.62
Exit Pupil Position (From Image Plane) (mm)		727
Filter Thread (mm)		—
Mount		CS
Mass (g)		30
Remarks		

For Security
Fixed Focal

YF8A-2

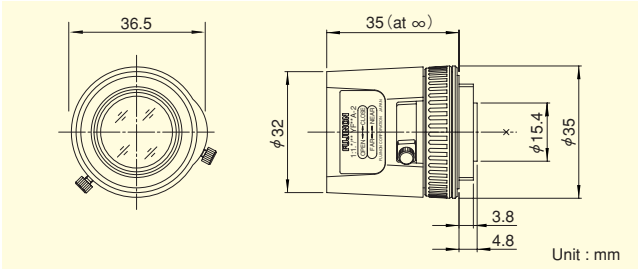
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | MANUAL Manual Iris | CS-mt CS Mount | F1.2 Wide Aperture Rate

*Photograph is a similar model.

- Compact and lightweight design of 30g, best suited for built-in lenses.
- Wide aperture of F1.2, optimizing the performance at low lighting intensity.



Unit : mm

Focal Length (mm)		8
Iris Range		F1.2 ~ Close
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1/3"	33°24′ × 25°22′
	1/4"	25°22′ × 19°09′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	71 × 53
	1/4"	53 × 40
Back Focal Distance (in air) (mm)		8.81
Exit Pupil Position (From Image Plane) (mm)		−147
Filter Thread (mm)		—
Mount		CS
Mass (g)		30
Remarks		

For Security
Fixed Focal

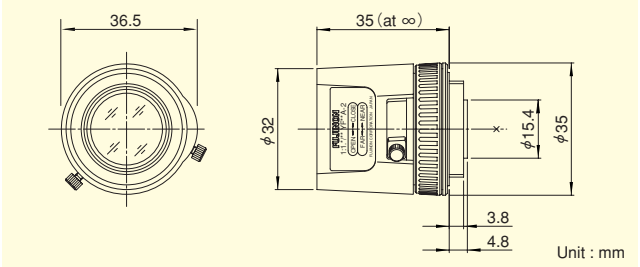
YF16A-2

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | TELE Telephoto Long Focal | MANUAL Manual Iris | CS-mt CS Mount | F1.4 Wide Aperture Rate

- Telephoto lens with the horizontal field angle of approximately 17 degrees.
- Compact and lightweight design of 25g, best suited for built-in lenses.
- Wide aperture of F1.4, optimizing the performance at low lighting intensity.



Unit : mm

Focal Length (mm)		16
Iris Range		F1.4 ~ Close
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1/3"	17°04′ × 12°50′
	1/4"	12°50′ × 9°39′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.5
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	153 × 115
	1/4"	115 × 86
Back Focal Distance (in air) (mm)		10.30
Exit Pupil Position (From Image Plane) (mm)		80
Filter Thread (mm)		—
Mount		CS
Mass (g)		25
Remarks		

For Security
Fixed Focal

YF2.8A-SA2B

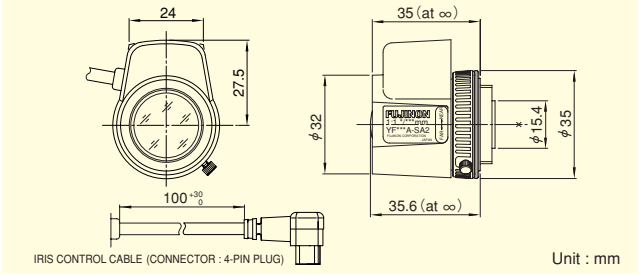
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | WIDE Wide Angle | DC DC Auto Iris | CS-mt CS Mount | ND ND Filter | 230 Long Cable | F1.3 Wide Aperture Rate

*Photograph is a similar model.

- Super wide angle lens with the horizontal field angle of 96 degrees or more (when used on 1/3" cameras).
- Built-in ND filter of T360, supporting high sensitivity cameras.
- Wide aperture of F1.3, optimizing the performance at low lighting intensity.



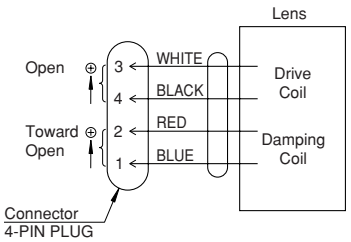
Focal Length (mm)		2.8
Iris Range		F1.3 ~ T360 (Equivalent to F360)
Operation	Focus	Manual
	Iris	Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	96°15′ × 71°51′
	1/4"	71°51′ × 53°45′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	241 × 157
	1/4"	157 × 110
Back Focal Distance (in air) (mm)		8.11
Exit Pupil Position (From Image Plane) (mm)		166
Filter Thread (mm)		—
Mount		CS
Mass (g)		50
Coil Resistance		Drive Coil 200Ω Damping Coil 600Ω
Current Consumption		22mA (Max.) at DC 4V

Remarks

(*1) When power is turned off, iris will automatically close.

YF2.8A-SA2LB:Long Cable Type (230mm)

Wiring



For Security
Fixed Focal

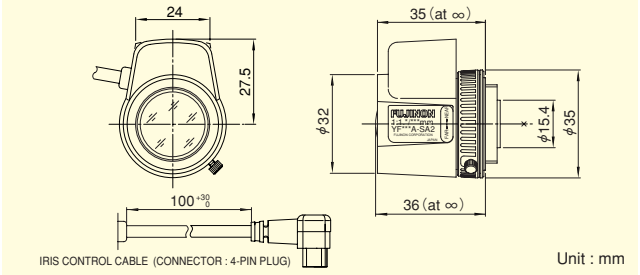
YF4A-SA2B

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | DC DC Auto Iris | CS-mt CS Mount | ND ND Filter | 230 Long Cable | F1.2 Wide Aperture Rate

- Built-in ND filter of T360, supporting high sensitivity cameras.
- Wide aperture of F1.2, optimizing the performance at low lighting intensity.



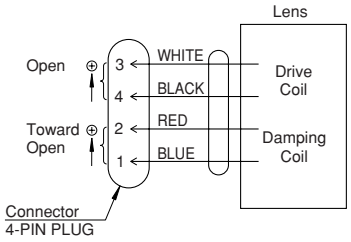
Focal Length (mm)		4
Iris Range		F1.2 ~ T360 (Equivalent to F360)
Operation	Focus	Manual
	Iris	Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	65°21′ × 49°27′
	1/4"	49°27′ × 37°15′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	132 × 99
	1/4"	99 × 73
Back Focal Distance (in air) (mm)		8.62
Exit Pupil Position (From Image Plane) (mm)		727
Filter Thread (mm)		—
Mount		CS
Mass (g)		40
Coil Resistance		Drive Coil 200Ω Damping Coil 600Ω
Current Consumption		22mA (Max.) at DC 4V

Remarks

(*1) When power is turned off, iris will automatically close.

YF4A-SA2LB : Long Cable Type (230mm)

Wiring



For Security
Fixed Focal

YF8A-SA2B

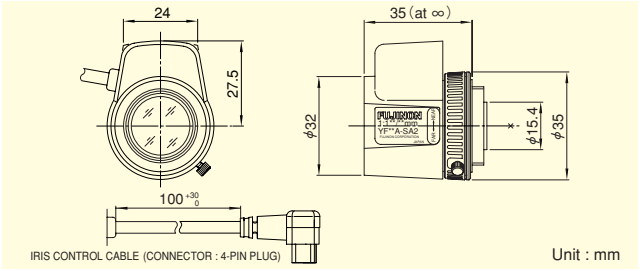
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | DC DC Auto Iris | CS-mt CS Mount | ND ND Filter | 230 Long Cable | F1.2 Wide Aperture Rate

*Photograph is a similar model.

- Built-in ND filter of T360, supporting high sensitivity cameras.
- Wide aperture of F1.2, optimizing the performance at low lighting intensity.



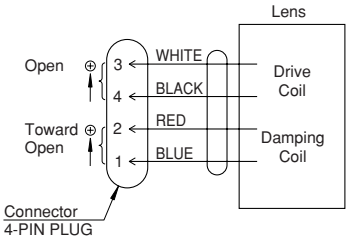
Focal Length (mm)		8
Iris Range		F1.2 ~ T360 (Equivalent to F360)
Operation	Focus	Manual
	Iris	Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	33°24′ × 25°22′
	1/4"	25°22′ × 19°09′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	71 × 53
	1/4"	53 × 40
Back Focal Distance (in air) (mm)		8.81
Exit Pupil Position (From Image Plane) (mm)		−147
Filter Thread (mm)		—
Mount		CS
Mass (g)		40
Coil Resistance		Drive Coil 200Ω Damping Coil 600Ω
Current Consumption		22mA (Max.) at DC 4V

Remarks

(*1) When power is turned off, iris will automatically close.

YF8A-SA2LB : Long Cable Type (230mm)

Wiring



For Security
Fixed Focal

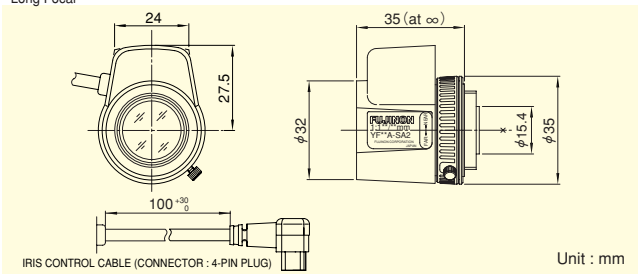
YF16A-SA2B

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | TELE Telephoto Long Focal | DC DC Auto Iris | CS-mt CS Mount | ND ND Filter | 230 Long Cable | F1.4 Wide Aperture Rate

- Telephoto lens with the horizontal field angle of approximately 17 degrees.
- Built-in ND filter of T360, supporting high sensitivity cameras.
- Wide aperture of F1.4, optimizing the performance at low lighting intensity.



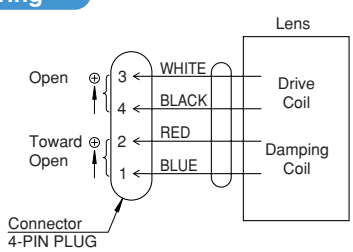
Focal Length (mm)		16
Iris Range		F1.4 ~ T360 (Equivalent to F360)
Operation	Focus	Manual
	Iris	Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	17°04′ × 12°50′
	1/4"	12°50′ × 9°39′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.5
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	153 × 115
	1/4"	115 × 86
Back Focal Distance (in air) (mm)		10.30
Exit Pupil Position (From Image Plane) (mm)		80
Filter Thread (mm)		—
Mount		CS
Mass (g)		35
Coil Resistance		Drive Coil 200Ω Damping Coil 600Ω
Current Consumption		22mA (Max.) at DC 4V

Remarks

(*1) When power is turned off, iris will automatically close.

YF16A-SA2LB : Long Cable Type (230mm)

Wiring



MP MEGA PIXELS YV2.7×2.2SA-2

Applicable camera (model)

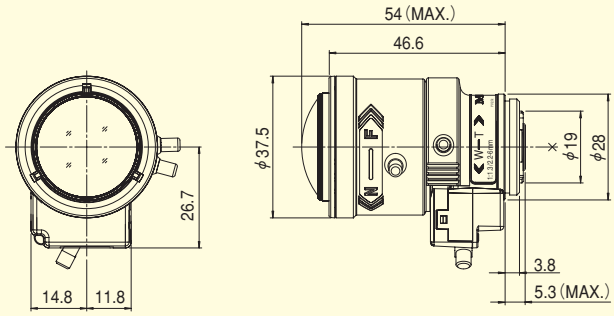
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | 3 Mega For Megapixel Camera | MANUAL Manual Iris | CS-mt CS Mount | METAL Metal Mount | AT Aspherical Lens | F1.3 Wide Aperture Rate

2.7×

New!

- High image-quality monitoring with optical performance supporting 3 megapixels.
- WIDE 2.2mm, achieving a horizontal field angle of 120 degrees (when used on 1/3 cameras).
- Compact and lightweight design, best suited for use with dome cameras.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.



Unit : mm

Focal Length (mm)			2.2~6 (2.7×)
Iris Range			F1.3 ~ Close
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	120°00′ × 91°36′
		TELE	46°26′ × 34°59′
	1/4"	WIDE	91°36′ × 69°21′
		TELE	34°59′ × 26°18′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	1075 × 638
		TELE	266 × 196
	1/4"	WIDE	638 × 429
		TELE	196 × 145
Back Focal Distance (in air) (mm)			7.70
Exit Pupil Position (From Image Plane) (mm)			−452
Filter Thread (mm)			—
Mount			CS
Mass (g)			55
Remarks			• With Metal Mount

[Lens Image]

2.2mm

6mm

MP MEGAPIXEL VARI-FOCAL LENSES

MP MEGA PIXELS YV2.8×2.8SA-2

Applicable camera (model)

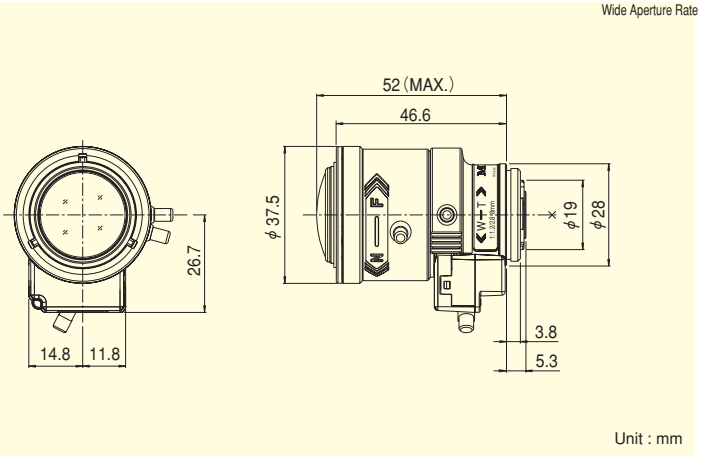
1 | 2/3 | 1/2 | 1/3 | 1/4

2.8×

New!

VARI Vari-Focal | WIDE Wide Angle | 3 Mega For Megapixel Camera | MANUAL Manual Iris | CS-mt CS Mount | METAL Metal Mount | AT Aspherical Lens | F1.2 Wide Aperture Rate

- High image-quality monitoring with optical performance supporting 3 megapixels.
- WIDE 2.8mm, achieving a horizontal field angle of 100 degrees (when used on 1/3 cameras).
- Compact and lightweight design, best suited for use with dome cameras.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.



Unit : mm

Focal Length (mm)			2.8~8 (2.8×)
Iris Range			F1.2 ~ Close
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	100°00′ × 73°45′
		TELE	35°03′ × 26°18′
	1/4"	WIDE	73°45′ × 54°49′
		TELE	26°18′ × 19°44′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	744 × 468
		TELE	197 × 146
	1/4"	WIDE	468 × 323
		TELE	146 × 108
Back Focal Distance (in air) (mm)			7.70
Exit Pupil Position (From Image Plane) (mm)			314
Filter Thread (mm)			—
Mount			CS
Mass (g)			50
Remarks			・With Metal Mount

[Lens Image]

2.8mm

▼

8mm

MP MEGAPIXEL VARI-FOCAL LENSES

MP MEGA PIXELS YV4.3×2.8SA-2

Applicable camera (model)

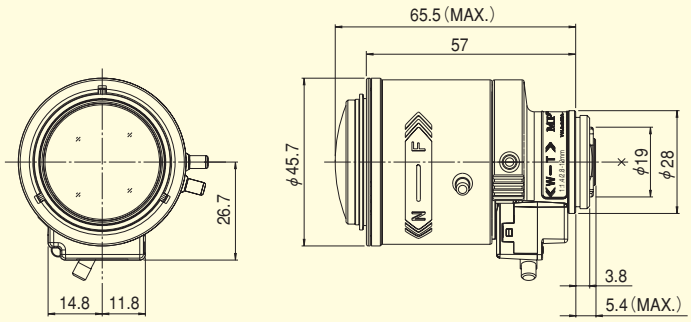
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | 3 Mega For Megapixel Camera | MANUAL Manual Iris | CS-mt CS Mount | METAL Metal Mount | AT Aspherical Lens | F1.4 Wide Aperture Rate

4.3×

New!

- High image-quality monitoring with optical performance supporting 3 megapixels.
- Wide f2.8-12mm range accommodates various applications
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.



Unit : mm

Focal Length (mm)			2.8~12 (4.3×)
Iris Range			F1.4 ~ Close
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	100°02′ × 74°03′
		TELE	23°26′ × 17°36′
	1/4"	WIDE	74°03′ × 55°06′
		TELE	17°36′ × 13°13′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	753 × 476
		TELE	131 × 98
	1/4"	WIDE	476 × 329
		TELE	98 × 73
Back Focal Distance (in air) (mm)			7.83
Exit Pupil Position (From Image Plane) (mm)			455
Filter Thread (mm)			—
Mount			CS
Mass (g)			80
Remarks			• With Metal Mount

[Lens Image]

2.8mm

12mm

MP MEGA PIXELS YV3.3×15SA-2

Applicable camera (model)

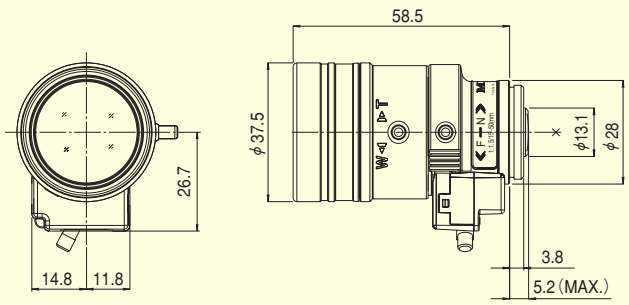
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal
TELE Telephoto Long Focal
3 Mega For Megapixel Camera
MANUAL Manual Iris
CS-mt CS Mount
METAL Metal Mount
AT Aspherical Lens
F1.5 Wide Aperture Rate

3.3×

New!

- High image-quality monitoring with optical performance supporting 3 megapixels.
- f15-50mm, 3.3x zooming application compatible lens.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.



Unit : mm

Focal Length (mm)			15~50 (3.3×)
Iris Range			F1.5 ~ Close
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	18°08′ × 13°34′
		TELE	5°35′ × 4°12′
	1/4"	WIDE	13°34′ × 10°10′
		TELE	4°12′ × 3°10′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.8
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	271 × 202
		TELE	87 × 66
	1/4"	WIDE	202 × 151
		TELE	66 × 49
Back Focal Distance (in air) (mm)			MIN.7.7
Exit Pupil Position (From Image Plane) (mm)			-36
Filter Thread (mm)			—
Mount			CS
Mass (g)			60
Remarks			・With Metal Mount

[Lens Image]

15mm

▼

50mm

MP MEGA PIXELS DV3.4×3.8SA-1

Applicable camera (model)

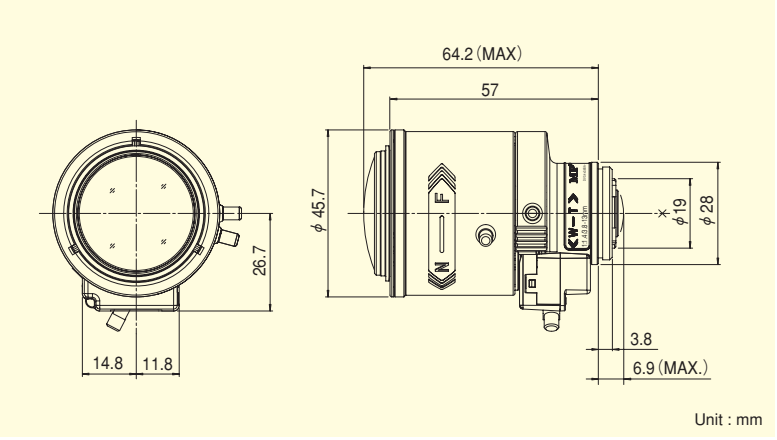
1 | 2/3 | 1/2 | 1/3 | 1/4

3.4×

New!

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | 3 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | AT Aspherical Lens | F1.4 Wide Aperture Rate

- High image-quality monitoring with optical performance supporting 3 megapixels.
- Compatible with a wide range - 1/2", 1/3" and 1/4" - cameras.
- Wide f3.8-13mm range accommodates various applications.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.



Focal Length (mm)			3.8~13 (3.4×)
Iris Range			F1.4 ~ Close
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/2"	WIDE	97°34′ × 71°47′
		TELE	28°23′ × 21°18′
	1/3"	WIDE	71°47′ × 53°25′
		TELE	21°18′ × 15°59′
	1/4"	WIDE	53°15′ × 39°41′
		TELE	15°59′ × 11°59′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	715 × 452
		TELE	170 × 126
	1/3"	WIDE	452 × 313
		TELE	126 × 94
	1/4"	WIDE	313 × 225
		TELE	94 × 70
Back Focal Distance (in air) (mm)			10.60
Exit Pupil Position (From Image Plane) (mm)			461
Filter Thread (mm)			—
Mount			C
Mass (g)			80
Remarks			・With Metal Mount

[Lens Image]

3.8mm

13mm

MP MEGA PIXELS YV2.1×2.8SR4A-SA2

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

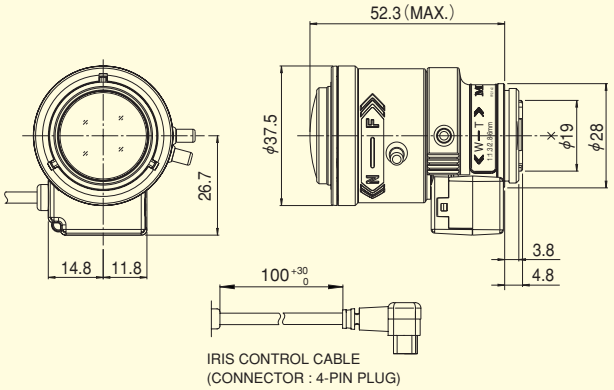
2.1×

New!

VARI Vari-Focal | WIDE Wide Angle | 3 Mega For Megapixel Camera | Day~Night Day & Night | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount

ND ND Filter | 230 Long Cable | AT Aspherical Lens | F1.3 Wide Aperture Rate

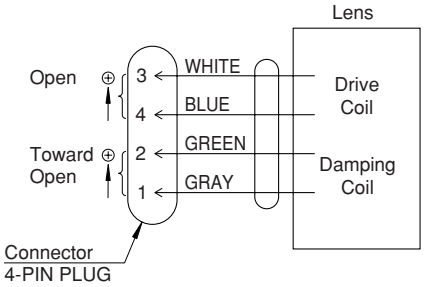
- High image-quality monitoring with optical performance supporting 3 megapixels.
- Advanced design engineering and special optic glass adopted, best suited for color, Black and White and Day and Night cameras.
- WIDE 2.8mm, achieving a horizontal field angle of 100 degrees (when used on 1/3 cameras).
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.
- Built-in ND filter of T360, supporting high sensitivity cameras.



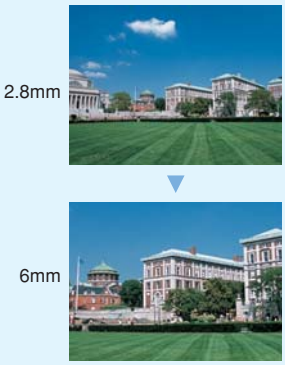
Unit : mm

Focal Length (mm)			2.8~6 (2.1×)
Iris Range			F1.3 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	101°11′ × 74°10′
		TELE	46°58′ × 35°09′
	1/4"	WIDE	74°10′ × 54°58′
		TELE	35°09′ × 26°19′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	758 × 470
		TELE	270 × 197
	1/4"	WIDE	470 × 323
		TELE	197 × 145
Back Focal Distance (in air) (mm)			9.03
Exit Pupil Position (From Image Plane) (mm)			−222
Filter Thread (mm)			—
Mount			CS
Mass (g)			55
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. YV2.1×2.8SR4A-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



YV2.7×2.2SA-SA2

Applicable camera (model)

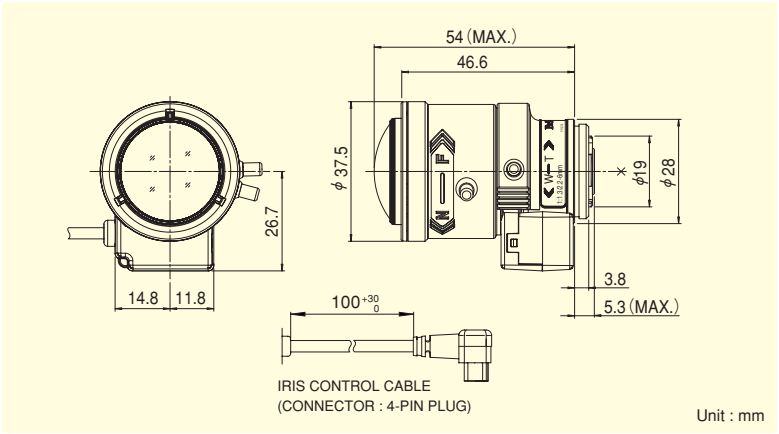
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | 3 Mega For Megapixel Camera | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | 230 Long Cable | AT Aspherical Lens | F1.3 Wide Aperture Rate

2.7×

New

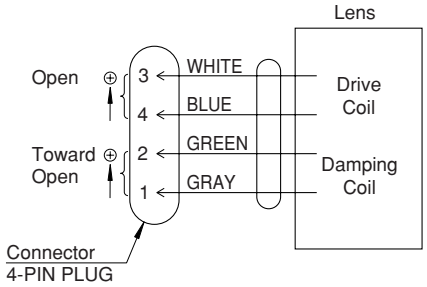
- High image-quality monitoring with optical performance supporting 3 megapixels.
- WIDE 2.2mm, achieving a horizontal field angle of 120 degrees (when used on 1/3 cameras).
- Compact and lightweight design, best suited for use with dome cameras.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.
- Built-in ND filter of T360, supporting high sensitivity cameras.



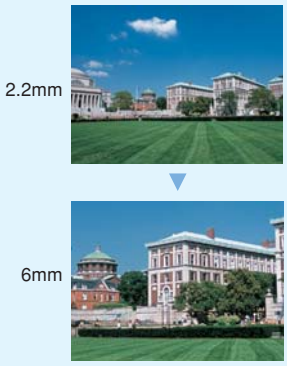
Unit : mm

Focal Length (mm)			2.2~6 (2.7×)
Iris Range			F1.3 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	120°00′ × 91°36′
		TELE	46°26′ × 34°59′
	1/4"	WIDE	91°36′ × 69°21′
		TELE	34°59′ × 26°18′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	1075 × 638
		TELE	266 × 196
	1/4"	WIDE	638 × 429
		TELE	196 × 145
Back Focal Distance (in air) (mm)			7.70
Exit Pupil Position (From Image Plane) (mm)			−452
Filter Thread (mm)			—
Mount			CS
Mass (g)			55
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. YV2.7×2.2SA-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



MP MEGA PIXELS YV2.8×2.8SA-SA2

Applicable camera (model)

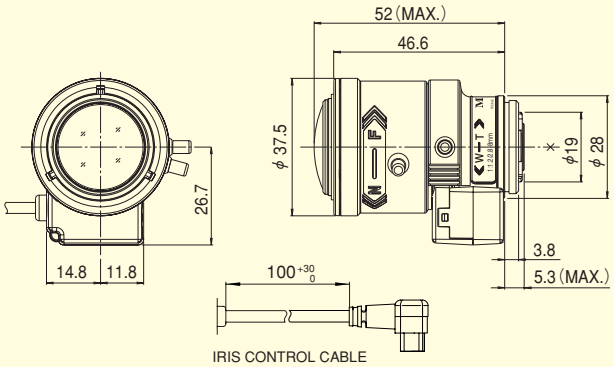
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | 3 Mega For Megapixel Camera | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter

230 Long Cable | AT Aspherical Lens | F1.2 Wide Aperture Rate

2.8×

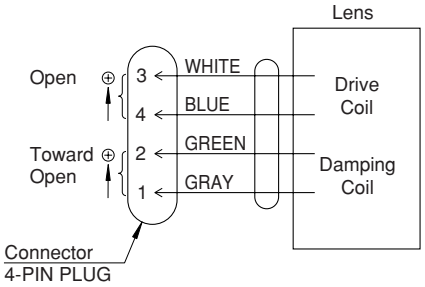
- High image-quality monitoring with optical performance supporting 3 megapixels.
- WIDE 2.8mm, achieving a horizontal field angle of 100 degrees (when used on 1/3 cameras).
- Compact and lightweight design, best suited for use with dome cameras.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.
- Built-in ND filter of T360, supporting high sensitivity cameras.



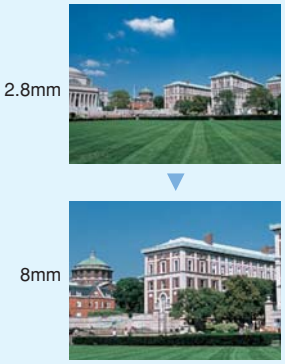
Unit : mm

Focal Length (mm)			2.8~8 (2.8×)
Iris Range			F1.2 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	100°00′ × 73°45′
		TELE	35°03′ × 26°18′
	1/4"	WIDE	73°45′ × 54°49′
		TELE	26°18′ × 19°44′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	744 × 468
		TELE	197 × 146
	1/4"	WIDE	468 × 323
		TELE	146 × 108
Back Focal Distance (in air) (mm)			7.70
Exit Pupil Position (From Image Plane) (mm)			314
Filter Thread (mm)			—
Mount			CS
Mass (g)			50
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. YV2.8×2.8SA-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



MP MEGA PIXELS YV4.3×2.8SA-SA2

Applicable camera (model)

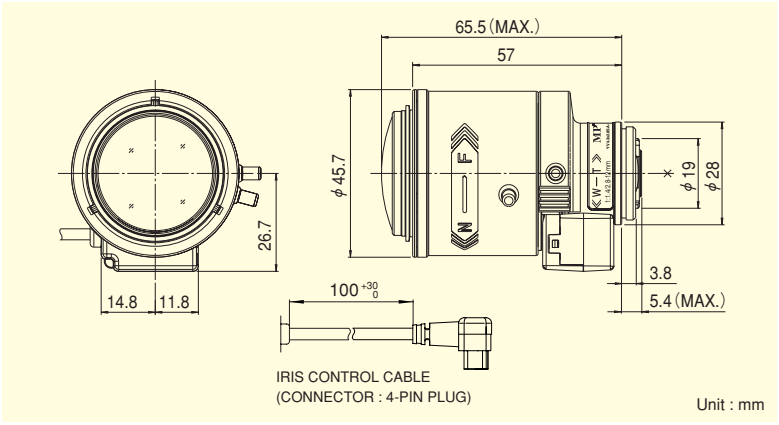
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | 3 Mega For Megapixel Camera | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount

ND ND Filter | 230 Long Cable | AT Aspherical Lens | F1.4 Wide Aperture Rate

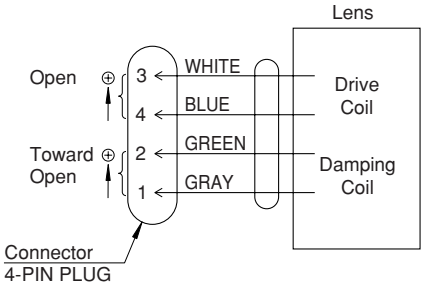
4.3×

- High image-quality monitoring with optical performance supporting 3 megapixels.
- Wide f2.8-12mm range accommodates various applications.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.
- Built-in ND filter of T360, supporting high sensitivity cameras.

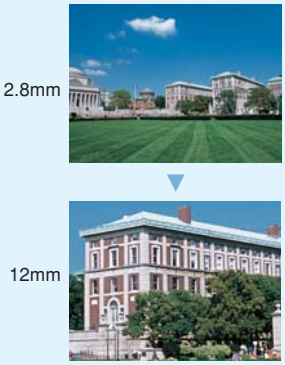


Focal Length (mm)			2.8~12 (4.3×)
Iris Range			F1.4 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	100°02′ × 74°03′
		TELE	23°26′ × 17°36′
	1/4"	WIDE	74°03′ × 55°06′
		TELE	17°36′ × 13°13′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	753 × 476
		TELE	131 × 98
	1/4"	WIDE	476 × 329
		TELE	98 × 73
Back Focal Distance (in air) (mm)			7.83
Exit Pupil Position (From Image Plane) (mm)			455
Filter Thread (mm)			—
Mount			CS
Mass (g)			80
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. YV4.3×2.8SA-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



MP MEGAPIXEL VARI-FOCAL LENSES

MP MEGA PIXELS YV3.3×15SA-SA2

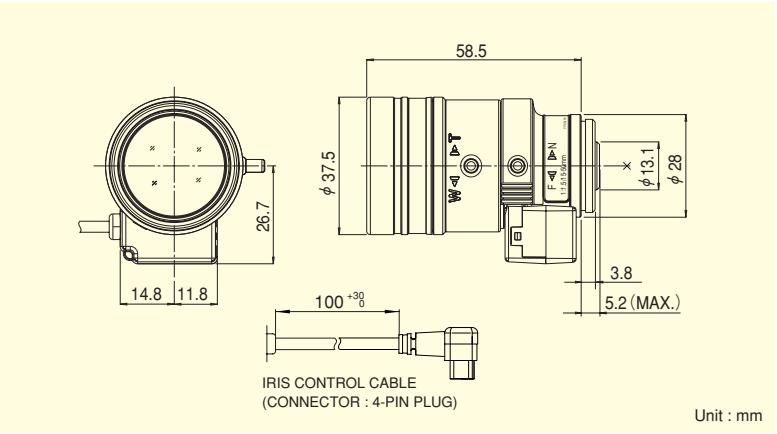
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | TELE Telephoto Long Focal | 3 Mega For Megapixel Camera | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | 230 Long Cable | AT Aspherical Lens | F1.5 Wide Aperture Rate

3.3×

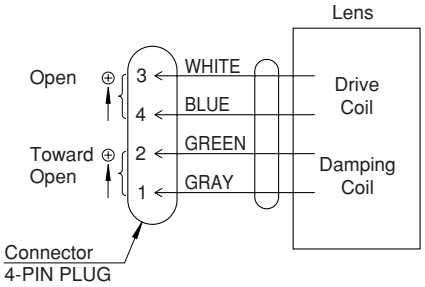
- High image-quality monitoring with optical performance supporting 3 megapixels.
- f15-50mm, 3.3x zooming application compatible lens.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.
- Built-in ND filter of T360, supporting high sensitivity cameras.



Unit : mm

Focal Length (mm)			15～50 (3.3×)
Iris Range			F1.5 ～ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	18°08′ × 13°34′
		TELE	5°35′ × 4°12′
	1/4"	WIDE	13°34′ × 10°10′
		TELE	4°12′ × 3°10′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 0.8
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	271 × 202
		TELE	87 × 66
	1/4"	WIDE	202 × 151
		TELE	66 × 49
Back Focal Distance (in air) (mm)			MIN.7.7
Exit Pupil Position (From Image Plane) (mm)			−36
Filter Thread (mm)			—
Mount			CS
Mass (g)			60
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. YV3.3×15SA-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]

15mm

50mm

MEGAPIXEL VARI-FOCAL LENSES

DV3.4×3.8SA-SA1

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

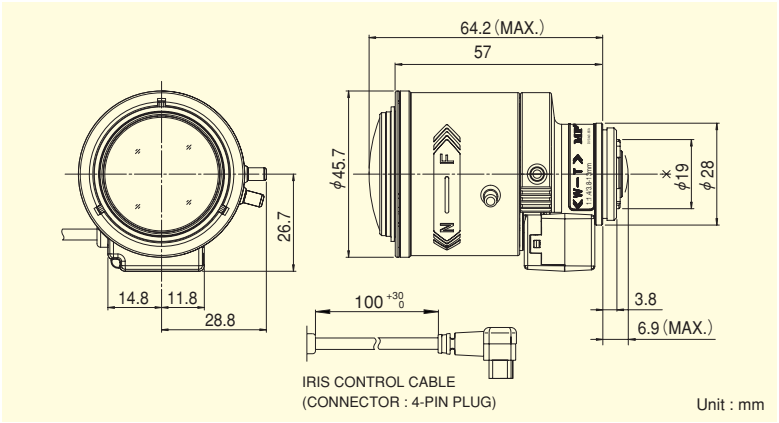
3.4×

New!

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | 3 Mega For Megapixel Camera | DC DC Auto Iris | C-mt C Mount | METAL Metal Mount

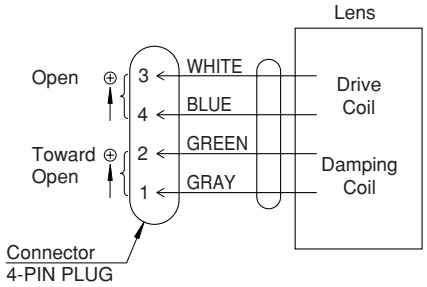
ND ND Filter | 230 Long Cable | AT Aspherical Lens | F1.4 Wide Aperture Rate

- High image-quality monitoring with optical performance supporting 3 megapixels.
- Compatible with a wide range - 1/2", 1/3" and 1/4" - cameras.
- Wide f3.8-13mm range accommodates various applications.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.
- Built-in ND filter of T360, supporting high sensitivity cameras.

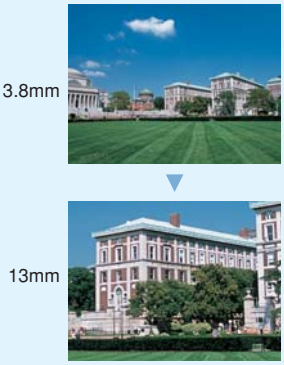


Focal Length (mm)			3.8~13 (3.4×)
Iris Range			F1.4 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/2"	WIDE	97°34′ × 71°47′
		TELE	28°23′ × 21°18′
	1/3"	WIDE	71°47′ × 53°25′
		TELE	21°18′ × 15°59′
	1/4"	WIDE	53°15′ × 39°41′
		TELE	15°59′ × 11°59′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	715 × 452
		TELE	170 × 126
	1/3"	WIDE	452 × 313
		TELE	126 × 94
	1/4"	WIDE	313 × 225
		TELE	94 × 70
Back Focal Distance (in air) (mm)			10.60
Exit Pupil Position (From Image Plane) (mm)			461
Filter Thread (mm)			—
Mount			C
Mass (g)			80
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. DV3.4×3.8SA-SA1L : Long Cable Type (230mm)

Wiring



[Lens Image]



MP MEGA PIXELS

YV10×5HR4A-2

Applicable camera (model)

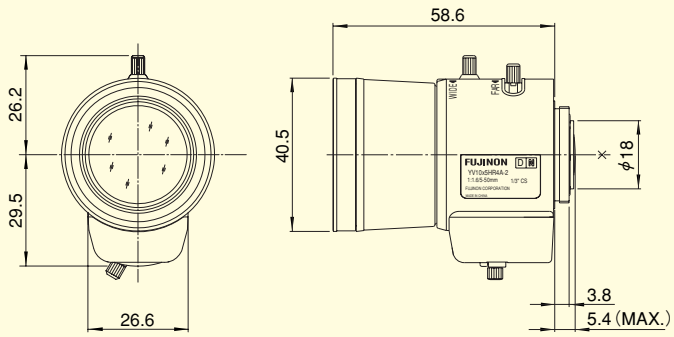
1 | 2/3 | 1/2 | 1/3 | 1/4

10×

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | 1.3 Mega For Megapixel Camera | Day~Night Day & Night | MANUAL Manual Iris | CS-mt CS Mount | METAL Metal Mount | AT Aspherical Lens | F1.6 Wide Aperture Rate

*Photograph is a similar model.

- High image-quality monitoring with optical performance supporting 1.3 megapixels.
- Advanced design engineering and special optic glass adopted, best suited for color, Black and White and Day and Night cameras.
- Broad range of f5-50mm, supporting various applications.
- Wide aperture of F1.6, optimizing the performance at low lighting intensity.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.



Unit : mm

Focal Length (mm)			5~50 (10×)
Iris Range			F1.6 ~ Close
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	51°17′ × 39°36′
		TELE	5°30′ × 4°07′
	1/4"	WIDE	39°36′ × 30°13′
		TELE	4°07′ × 3°06′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	304 × 228
		TELE	54 × 41
	1/4"	WIDE	228 × 171
		TELE	41 × 31
Back Focal Distance (in air) (mm)			7.50
Exit Pupil Position (From Image Plane) (mm)			−43
Filter Thread (mm)			—
Mount			CS
Mass (g)			80
Remarks			• With Metal Mount

[Lens Image]

5mm

50mm

MEGAPIXEL VARI-FOCAL LENSES

For Security Vari-Focal MP MEGA PIXELS YV3.3×15HR4A-SA2

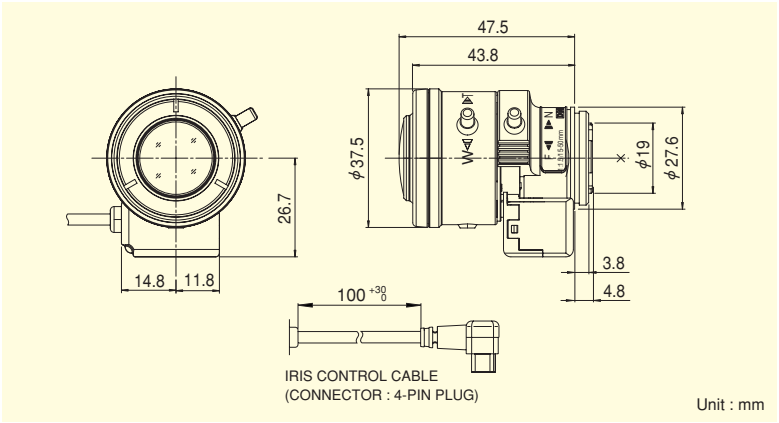
3.3×

New!

VARI Vari-Focal
TELE Telephoto Long Focal
1.3 Mega For Megapixel Camera
Day~Night Day & Night
DC DC Auto Iris
CS-mt CS Mount
METAL Metal Mount
ND ND Filter
AT Aspherical Lens
F1.5 Wide Aperture Rate

*Photograph is a similar model.

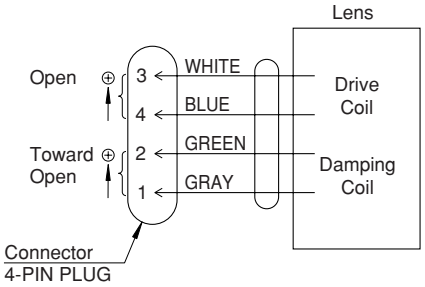
- High image-quality monitoring with optical performance supporting 1.3 megapixels.
- Advanced design engineering and special optic glass adopted, best suited for color, Black and White and Day and Night cameras.
- f15-50mm, 3.3x zooming application compatible lens.
- Compact and lightweight design, best suited for use with dome cameras.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.
- Built-in ND filter of T360, supporting high sensitivity cameras.



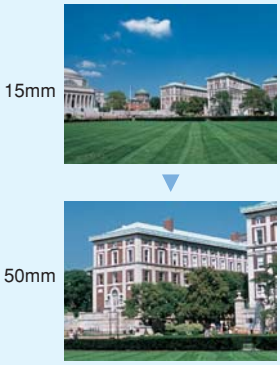
Unit : mm

Focal Length (mm)			15~50 (3.3×)
Iris Range			F1.5 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	18°29′ × 13°45′
		TELE	5°29′ × 4°09′
	1/4"	WIDE	13°45′ × 10°16′
		TELE	4°09′ × 3°08′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.8
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	271 × 201
		TELE	91 × 69
	1/4"	WIDE	201 × 150
		TELE	69 × 52
Back Focal Distance (in air) (mm)			MIN.8.56
Exit Pupil Position (From Image Plane) (mm)			−50
Filter Thread (mm)			—
Mount			CS
Mass (g)			50
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close.

Wiring



[Lens Image]



YV10×5HR4A-SA2

Applicable camera (model)

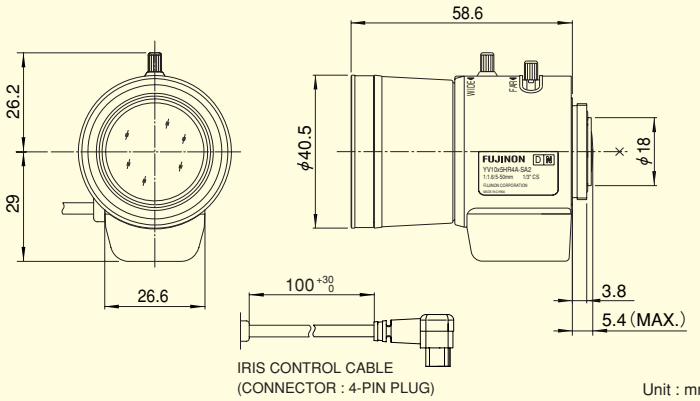
1 | 2/3 | 1/2 | 1/3 | 1/4

10×

*Photograph is a similar model.

VARI Vari-Focal
WIDE Wide Angle
TELE Telephoto Long Focal
1.3 Mega For Megapixel Camera
Day~Night Day & Night
DC DC Auto Iris
CS-mt CS Mount
METAL Metal Mount
ND ND Filter
230 Long Cable
AT Aspherical Lens
F1.6 Wide Aperture Rate

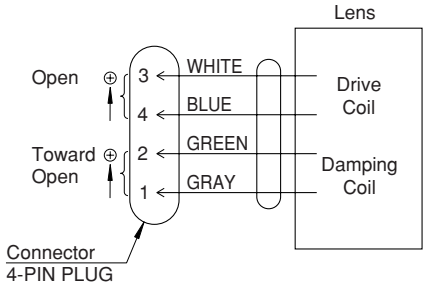
- High image-quality monitoring with optical performance supporting 1.3 megapixels.
- Advanced design engineering and special optic glass adopted, best suited for color, Black and White and Day and Night cameras.
- Broad range of f5-50mm, supporting various applications.
- Wide aperture of F1.6, optimizing the performance at low lighting intensity.
- Designed to maximize optical performance with high-accuracy aspheric lens, low-dispersion glass, and high refractive-index glass.
- Built-in ND filter of T360, supporting high sensitivity cameras.



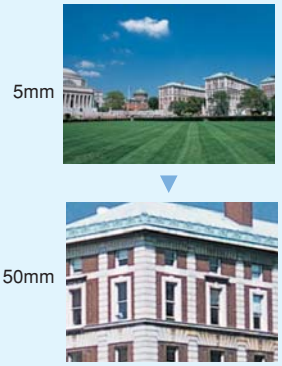
Unit : mm

Focal Length (mm)			5~50 (10×)
Iris Range			F1.6 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	51°17′ × 39°36′
		TELE	5°30′ × 4°07′
	1/4"	WIDE	39°36′ × 30°13′
		TELE	4°07′ × 3°06′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	304 × 228
		TELE	54 × 41
	1/4"	WIDE	228 × 171
		TELE	41 × 31
Back Focal Distance (in air) (mm)			7.50
Exit Pupil Position (From Image Plane) (mm)			−43
Filter Thread (mm)			—
Mount			CS
Mass (g)			85
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. YV10×5HR4A-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



YV2.2×1.4A-2

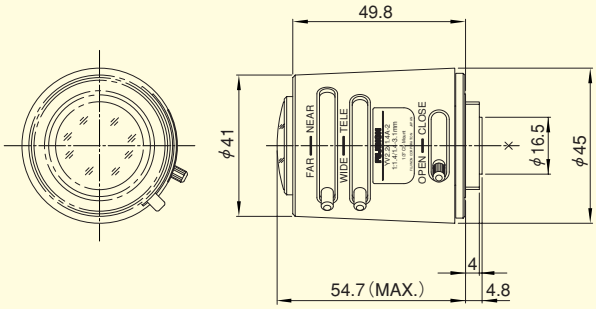
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | Fish-Eye 185° Fish-Eye | MANUAL Manual Iris | CS-mt CS Mount | F1.4 Wide Aperture Rate

Fish-Eye 2.2×

- Fish-Eye vari-focal lens with the horizontal field angle of 185-94 degrees (when used on 1/3 cameras).
- Wide aperture of F1.4, optimizing the performance at low lighting intensity.

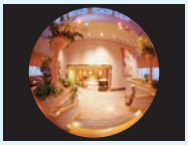


Unit : mm

Focal Length (mm)			1.4~3.1 (2.2×)
Iris Range			F1.4 ~ Close
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	185° (φ3.45mm)
		TELE	94°47′ × 69°26′
	1/4"	WIDE	185° × 121°
		TELE	69°26′ × 51°30′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.2
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	—
		TELE	448 × 287
	1/4"	WIDE	—
		TELE	287 × 200
Back Focal Distance (in air) (mm)			7.82
Exit Pupil Position (From Image Plane) (mm)			−45
Filter Thread (mm)			—
Mount			CS
Mass (g)			70
Remarks			

[Fish-Eye Lens Image]

1/3"



1/4"

VARI-FOCAL LENSES

YV2.4×2.5A-2

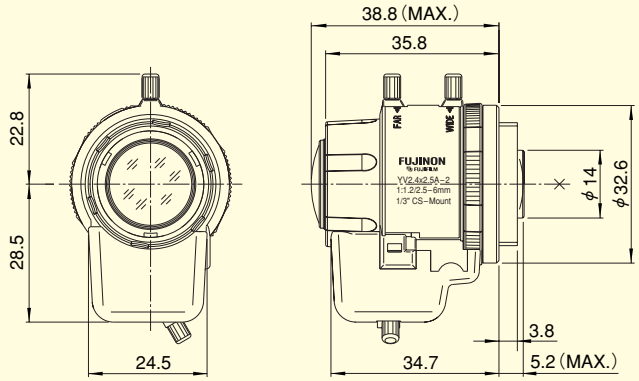
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | MANUAL Manual Iris | CS-mt CS Mount | METAL Metal Mount | N D ND Filter | AT Aspherical Lens | F1.2 Wide Aperture Rate

2.4×

- WIDE2.5mm, achieving the horizontal field angle of 110 degrees (when used on 1/3 cameras).
- Wide aperture of F1.2, optimizing the performance at low lighting intensity.
- Compact and lightweight design, best suited for the use with dome cameras.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.



Unit : mm

Focal Length (mm)			2.5~6 (2.4×)
Iris Range			F1.2 ~ T360・C
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	110°00′ × 80°58′
		TELE	46°11′ × 34°34′
	1/4"	WIDE	80°58′ × 60°80′
		TELE	34°34′ × 25°54′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	880 × 525
		TELE	262 × 191
	1/4"	WIDE	525 × 356
		TELE	191 × 141
Back Focal Distance (in air) (mm)			7.51
Exit Pupil Position (From Image Plane) (mm)			104
Filter Thread (mm)			—
Mount			CS
Mass (g)			30
Remarks			・With Metal Mount

[Lens Image]

2.5mm

▼

6mm

VARI-FOCAL LENSES

YV2.7×2.9LR4D-2

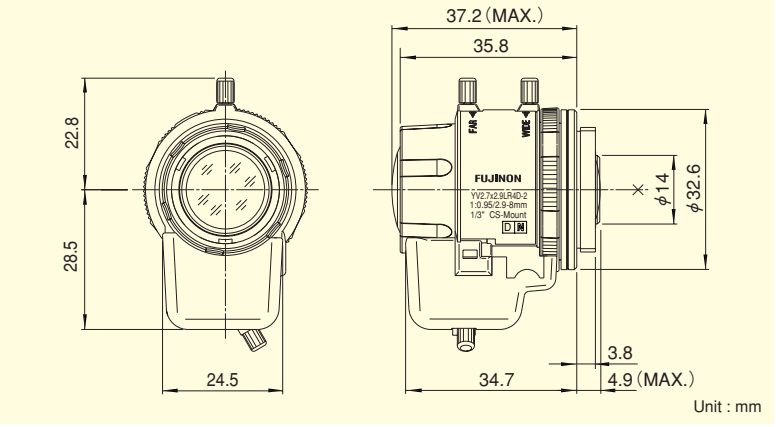
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

2.7×

VARI Vari-Focal | WIDE Wide Angle | Day~Night Day & Night | MANUAL Manual Iris | CS-mt CS Mount | METAL Metal Mount | N D ND Filter | AT Aspherical Lens | F0.95 Wide Aperture Rate

- Advanced design engineering and special optic glass adopted, best suited for color, Black and White and Day and Night cameras.
- Unparalleled brightness at the maximum aperture of F0.95, optimizing the performance at low lighting intensity.
- WIDE2.9mm, achieving the horizontal field angle of 94 degrees (when used on 1/3 cameras).
- Compact and lightweight design, best suited for the use with dome cameras.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.



Unit : mm

Focal Length (mm)			2.9~8 (2.7×)
Iris Range			F0.95 ~ T360・C
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	94°37′ × 69°30′
		TELE	35°18′ × 26°26′
	1/4"	WIDE	69°30′ × 51°33′
		TELE	26°26′ × 19°48′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	670 × 428
		TELE	196 × 145
	1/4"	WIDE	428 × 298
		TELE	145 × 108
Back Focal Distance (in air) (mm)			7.73
Exit Pupil Position (From Image Plane) (mm)			74
Filter Thread (mm)			—
Mount			CS
Mass (g)			35
Remarks			・With Metal Mount

[Lens Image]

2.9mm

8mm

VARI-FOCAL LENSES

YV2.8×2.8LA-2

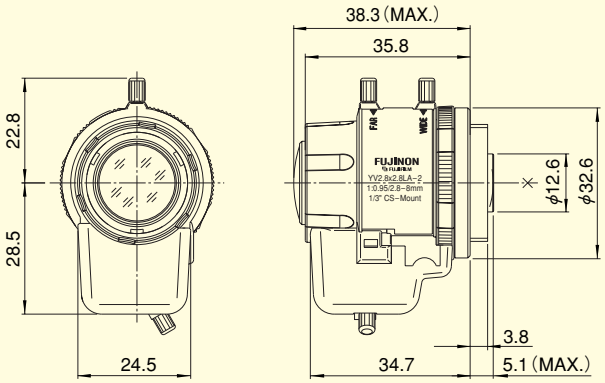
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

2.8×

VARI Vari-Focal | WIDE Wide Angle | MANUAL Manual Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | AT Aspherical Lens | F0.95 Wide Aperture Rate

- Unparalleled brightness at the maximum aperture of F0.95, optimizing the performance at low lighting intensity.
- WIDE2.8mm, achieving the horizontal field angle of 99 degrees (when used on 1/3 cameras).
- Compact and lightweight design, best suited for the use with dome cameras.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.



Unit : mm

Focal Length (mm)			2.8~8 (2.8×)
Iris Range			F0.95 ~ T360・C
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	99°52′ × 73°17′
		TELE	35°14′ × 26°24′
	1/4"	WIDE	73°17′ × 54°19′
		TELE	26°24′ × 19°47′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	736 × 459
		TELE	196 × 145
	1/4"	WIDE	459 × 317
		TELE	145 × 108
Back Focal Distance (in air) (mm)			7.51
Exit Pupil Position (From Image Plane) (mm)			91
Filter Thread (mm)			—
Mount			CS
Mass (g)			35
Remarks			・With Metal Mount

[Lens Image]

2.8mm

8mm

VARI-FOCAL LENSES

YV5×2.7R4B-2

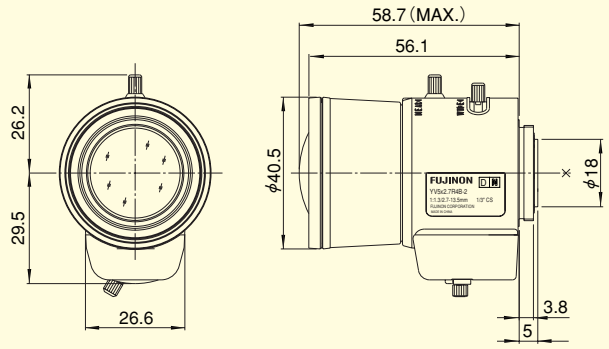
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

5×

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | Day~Night Day & Night | MANUAL Manual Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | AT Aspherical Lens | F1.3 Wide Aperture Rate

- Advanced design engineering and special optic glass adopted, best suited for color, Black and White and Day and Night cameras.
- Broad range of f2.7-13.5mm, supporting various applications.
- Wide aperture of F1.3, optimizing the performance at low lighting intensity.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.



Unit : mm

Fixed Focal (mm)			2.7~13.5 (5×)
Iris Range			F1.3 ~ T360・C
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	99°42′ × 74°17′
		TELE	20°37′ × 15°30′
	1/4"	WIDE	74°17′ × 55°26′
		TELE	15°30′ × 11°38′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	741 × 473
		TELE	115 × 86
	1/4"	WIDE	473 × 328
		TELE	86 × 64
Back Focal Distance (in air) (mm)			8.91
Exit Pupil Position (From Image Plane) (mm)			96
Filter Thread (mm)			—
Mount			CS
Mass (g)			65
Remarks			・With Metal Mount

[Lens Image]

2.7mm

13.5mm

VARI-FOCAL LENSES

YV10×5B-2

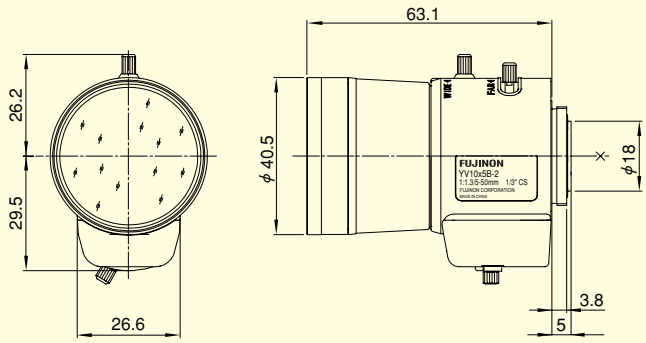
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | MANUAL Manual Iris | CS-mt CS Mount | METAL Metal Mount | N D ND Filter | AT Aspherical Lens | F1.3 Wide Aperture Rate

10×

- Telephoto, broad range vari-focal lens with the horizontal field angle of 51-5 degrees (when used on 1/3 cameras).
- Wide range of f5-50mm, supporting various applications.
- Wide aperture of F1.3, optimizing the performance at low lighting intensity.
- Built-in ND filter of T360, supporting high sensitivity cameras.



Unit : mm

Focal Length (mm)			5～50 (10×)
Iris Range			F1.3 ～ T360・C
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/3"	WIDE	51°59′ × 39°12′
		TELE	5°24′ × 4°05′
	1/4"	WIDE	39°12′ × 29°30′
		TELE	4°05′ × 3°05′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	315 × 230
		TELE	62 × 47
	1/4"	WIDE	230 × 170
		TELE	47 × 35
Back Focal Distance (in air) (mm)			10.00
Exit Pupil Position (From Image Plane) (mm)			292
Filter Thread (mm)			—
Mount			CS
Mass (g)			95
Remarks			・With Metal Mount

[Lens Image]

5mm

50mm

VARI-FOCAL LENSES

DV5×3.6R4B-2

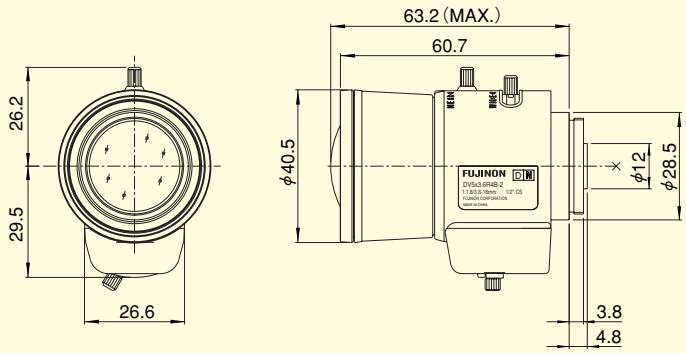
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal
WIDE Wide Angle
TELE Telephoto Long Focal
Day~Night Day & Night
MANUAL Manual Iris
CS-mt CS Mount
METAL Metal Mount
ND ND Filter
AT Aspherical Lens

5×

- Advanced design engineering and special optic glass adopted, best suited for color, Black and White and Day and Night cameras.
- Compatible with a wide range - 1/2", 1/3" and 1/4" - cameras.
- Broad range of f3.6-18mm, supporting various applications.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.



Unit : mm

Focal Length (mm)			3.6~18 (5×)
Iris Range			F1.8 ~ T360・C
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/2"	WIDE	95°54′ × 72°24′
		TELE	19°57′ × 15°09′
	1/3"	WIDE	72°24′ × 54°25′
		TELE	15°09′ × 11°26′
	1/4"	WIDE	54°25′ × 40°50′
		TELE	11°26′ × 8°37′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	694 × 457
		TELE	110 × 83
	1/3"	WIDE	457 × 321
		TELE	83 × 62
	1/4"	WIDE	321 × 232
		TELE	62 × 47
Back Focal Distance (in air) (mm)			7.87
Exit Pupil Position (From Image Plane) (mm)			−81
Filter Thread (mm)			—
Mount			CS
Mass (g)			65
Remarks			・With Metal Mount

[Lens Image]

3.6mm

18mm

VARI-FOCAL LENSES

DV10×7B-2

Applicable camera (model)

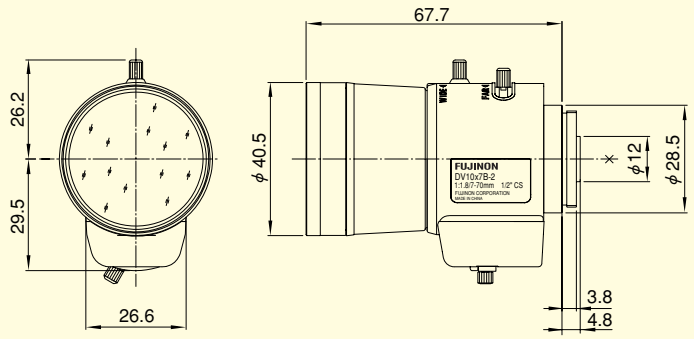
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | MANUAL Manual Iris | CS-mt CS Mount | METAL Metal Mount | N D ND Filter | AT Aspherical Lens

10×

*Photograph is a similar model.

- Compatible with a wide range - 1/2", 1/3" and 1/4" - cameras.
- Broad range of f7-70mm, supporting various applications.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.



Unit : mm

Focal Length (mm)			7～70 (10×)
Iris Range			F1.8 ～ T360・C
Operation	Zoom		Manual
	Focus		Manual
	Iris		Manual
Angle Of View (H×V)	1/2"	WIDE	50°01′ × 38°12′
		TELE	5°12′ × 3°59′
	1/3"	WIDE	38°12′ × 28°56′
		TELE	3°59′ × 3°02′
	1/4"	WIDE	28°56′ × 21°49′
		TELE	3°02′ × 2°17′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	301 × 223
		TELE	60 × 46
	1/3"	WIDE	223 × 166
		TELE	46 × 35
	1/4"	WIDE	166 × 124
		TELE	35 × 26
Back Focal Distance (in air) (mm)			7.90
Exit Pupil Position (From Image Plane) (mm)			−62
Filter Thread (mm)			—
Mount			CS
Mass (g)			95
Remarks			・With Metal Mount

[Lens Image]

7mm

70mm

VARI-FOCAL LENSES

YV2.2×1.4A-SA2

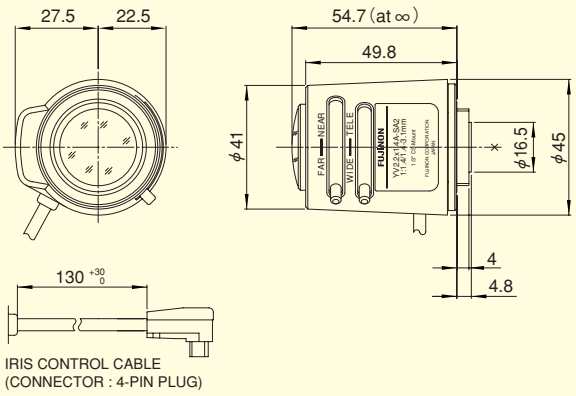
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | Fish-Eye 185° Fish-Eye | DC DC Auto Iris | CS-mt CS Mount | ND ND Filter | 230 Long Cable | F1.4 Wide Aperture Rate

Fish-Eye 2.2×

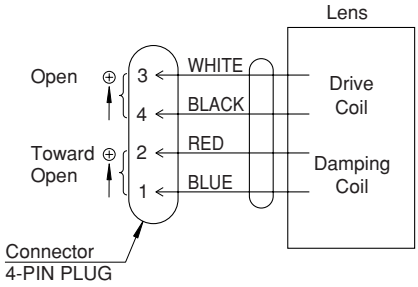
- Fish-Eye vari-focal lens with the horizontal field angle of 185-94 degrees (when used on 1/3 cameras).
- Wide aperture of F1.4, optimizing the performance at low lighting intensity.
- Built-in ND filter of T360, supporting high sensitivity cameras.



Unit : mm

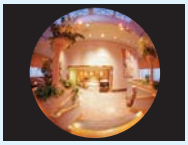
Focal Length (mm)			1.4~3.1 (2.2×)
Iris Range			F1.4 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	185° (φ3.45)
		TELE	94°47′ × 69°26′
	1/4"	WIDE	185° × 121°
		TELE	69°26′ × 51°30′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.2
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	—
		TELE	448 × 287
	1/4"	WIDE	—
		TELE	287 × 200
Back Focal Distance (in air) (mm)			7.82
Exit Pupil Position (From Image Plane) (mm)			−45
Filter Thread (mm)			—
Mount			CS
Mass (g)			80
Coil Resistance			Drive Coil 200Ω Damping Coil 600Ω
Current Consumption			22mA (Max.) at DC 4V
Remarks			(*1) When power is turned off, iris will automatically close. YV2.2×1.4A-SA2L : Long Cable Type (230mm)

Wiring



[Fish-Eye Lens Image]

1/3"



1/4"

VARI-FOCAL LENSES

YV2.4×2.5A-SA2

Applicable camera (model)

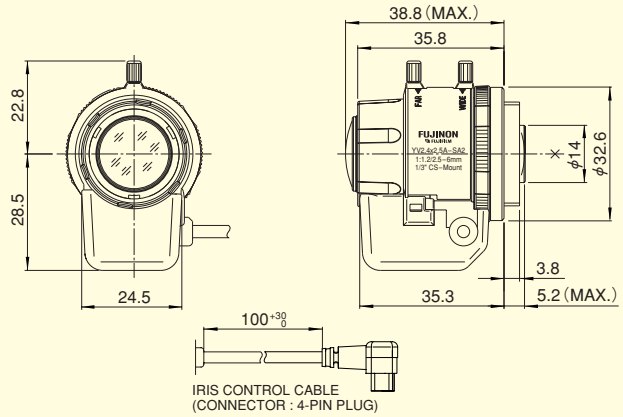
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | 230 Long Cable | AT Aspherical Lens | F1.2 Wide Aperture Rate

2.4×

*Photograph is a similar model.

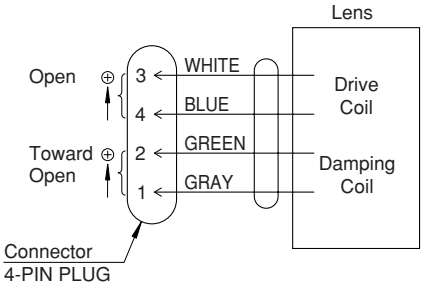
- WIDE2.5mm, achieving the horizontal field angle of 110 degrees (when used on 1/3 cameras).
- Wide aperture of F1.2, optimizing the performance at low lighting intensity.
- Compact and lightweight design, best suited for the use with dome cameras.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.



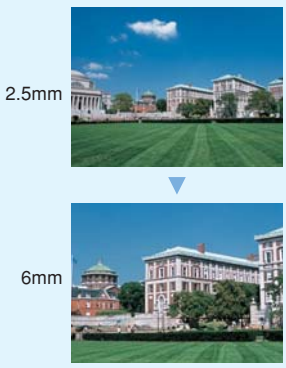
Unit : mm

Focal Length (mm)			2.5~6 (2.4×)
Iris Range			F1.2 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	110°00′ × 80°58′
		TELE	46°11′ × 34°34′
	1/4"	WIDE	80°58′ × 60°80′
		TELE	34°34′ × 25°54′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	880 × 525
		TELE	262 × 191
	1/4"	WIDE	525 × 356
		TELE	191 × 141
Back Focal Distance (in air) (mm)			7.51
Exit Pupil Position (From Image Plane) (mm)			104
Filter Thread (mm)			—
Mount			CS
Mass (g)			45
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			・With Metal Mount (*1) When power is turned off, iris will automatically close. YV2.4×2.5A-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



VARI-FOCAL LENSES

YV2.7×2.9LR4D-SA2

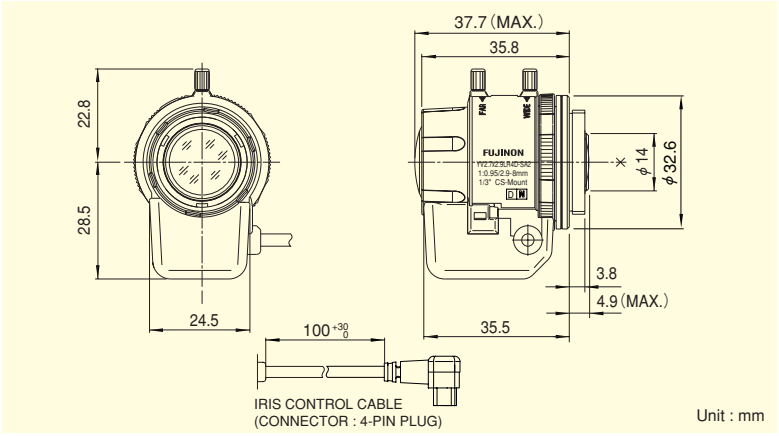
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | Day~Night Day & Night | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | 230 Long Cable | AT Aspherical Lens | F0.95 Wide Aperture Rate

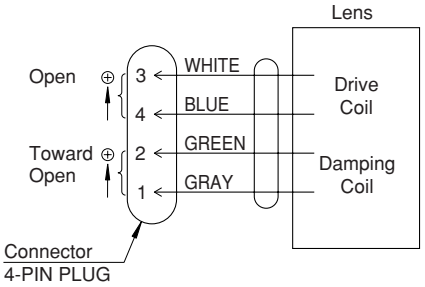
2.7×

- Advanced design engineering and special optic glass adopted, best suited for color, Black and White and Day and Night cameras.
- Unparalleled brightness at the maximum aperture of F0.95, optimizing the performance at low lighting intensity.
- WIDE2.9mm, achieving the horizontal field angle of 94 degrees (when used on 1/3 cameras).
- Compact and lightweight design, best suited for the use with dome cameras.
- High accuracy aspheric lens adopted, achieving the high quality image.

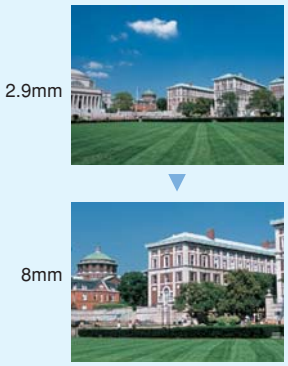


Focal Length (mm)			2.9~8 (2.7×)
Iris Range			F0.95 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	94°37′ × 69°30′
		TELE	35°18′ × 26°26′
	1/4"	WIDE	69°29′ × 51°29′
		TELE	26°22′ × 19°46′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	670 × 428
		TELE	196 × 145
	1/4"	WIDE	428 × 298
		TELE	145 × 107
Back Focal Distance (in air) (mm)			7.73
Exit Pupil Position (From Image Plane) (mm)			74
Filter Thread (mm)			—
Mount			CS
Mass (g)			45
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. YV2.7×2.9LR4D-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



VARI-FOCAL LENSES

YV2.8×2.8LA-SA2

Applicable camera (model)

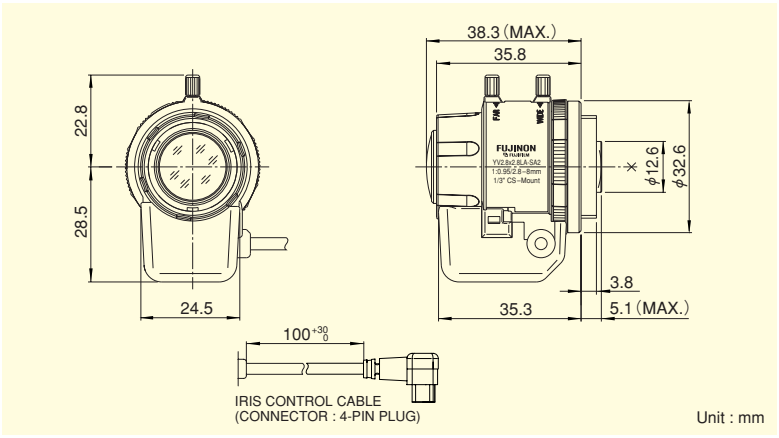
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | 230 Long Cable | AT Aspherical Lens | F0.95 Wide Aperture Rate

2.8×

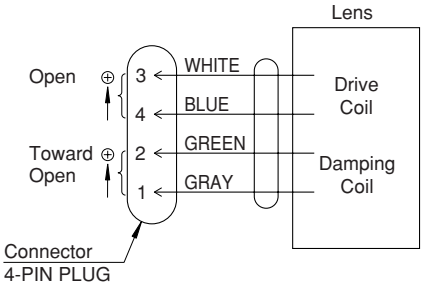
*Photograph is a similar model.

- Unparalleled brightness at the maximum aperture of F0.95, optimizing the performance at low lighting intensity.
- WIDE2.8mm, achieving the horizontal field angle of 99 degrees (when used on 1/3 cameras).
- Compact and lightweight design, best suited for the use with dome cameras.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.

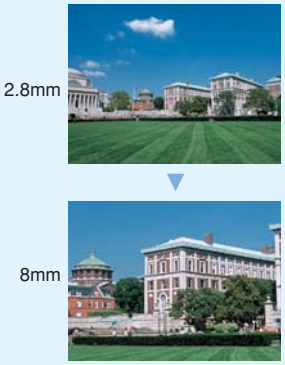


Focal Length (mm)			2.8~8 (2.8×)
Iris Range			F0.95 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	99°52′ × 73°17′
		TELE	35°14′ × 26°24′
	1/4"	WIDE	73°17′ × 54°19′
		TELE	26°24′ × 19°47′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	736 × 459
		TELE	196 × 145
	1/4"	WIDE	459 × 317
		TELE	145 × 108
Back Focal Distance (in air) (mm)			7.51
Exit Pupil Position (From Image Plane) (mm)			91
Filter Thread (mm)			—
Mount			CS
Mass (g)			45
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			・With Metal Mount (*1) When power is turned off, iris will automatically close. YV2.8×2.8LA-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



VARI-FOCAL LENSES

YV5×2.7R4B-SA2

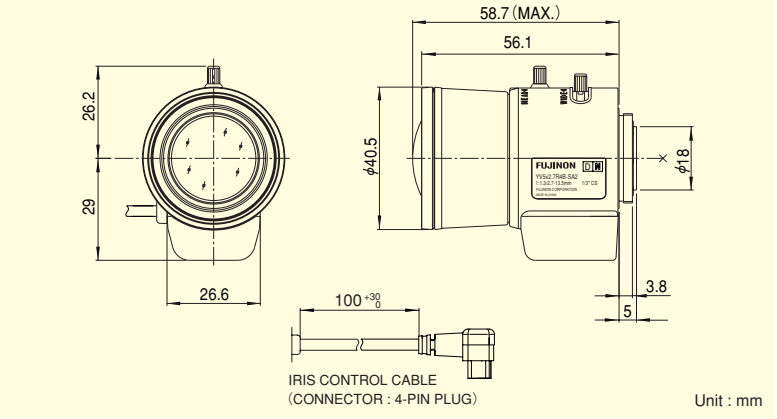
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | Day~Night Day & Night | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount
ND ND Filter | 230 Long Cable | AT Aspherical Lens | F1.3 Wide Aperture Rate

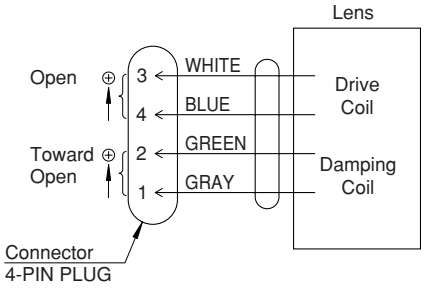
5×

- Advanced design engineering and special optic glass adopted, best suited for color, Black and White and Day and Night cameras.
- Broad range of f2.7-13.5mm, supporting various applications.
- Wide aperture of F1.3, optimizing the performance at low lighting intensity.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.

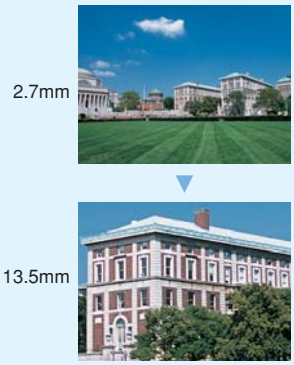


Focal Length (mm)			2.7~13.5 (5×)
Iris Range			F1.3 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	99°42′ × 74°17′
		TELE	20°37′ × 15°30′
	1/4"	WIDE	74°17′ × 55°26′
		TELE	15°30′ × 11°38′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	741 × 473
		TELE	115 × 86
	1/4"	WIDE	473 × 328
		TELE	86 × 64
Back Focal Distance (in air) (mm)			8.91
Exit Pupil Position (From Image Plane) (mm)			96
Filter Thread (mm)			—
Mount			CS
Mass (g)			70
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. YV5×2.7R4B-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



VARI-FOCAL LENSES

YV10×5B-SA2

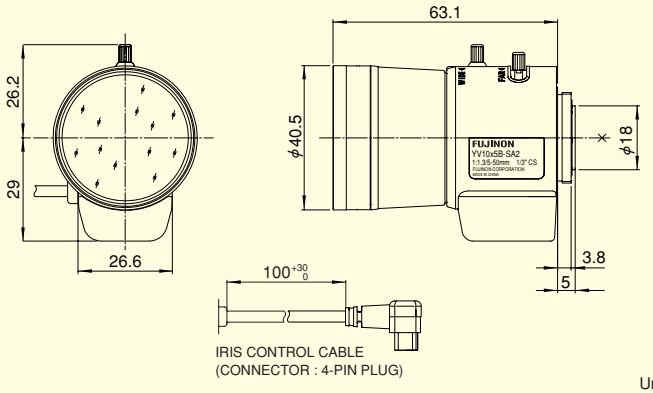
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | 230 Long Cable | AT Aspherical Lens | F1.3 Wide Aperture Rate

10×

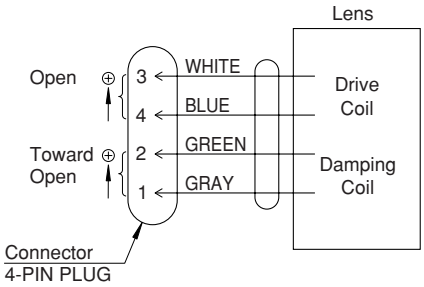
- Telephoto, wide range vari-focal lens with the horizontal field angle of 51-5 degrees (when used on 1/3 cameras).
- Broad range of f5-50mm, supporting various applications.
- Wide aperture of F1.3, optimizing the performance at low lighting intensity.
- Built-in ND filter of T360, supporting high sensitivity cameras.



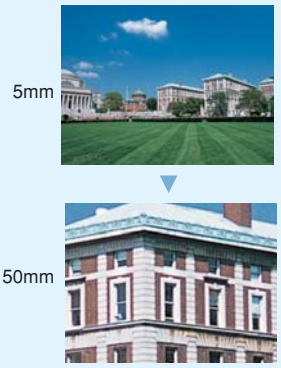
Unit : mm

Focal Length (mm)			5~50 (10×)
Iris Range			F1.3 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	51°59′ × 39°12′
		TELE	5°24′ × 4°05′
	1/4"	WIDE	39°12′ × 29°30′
		TELE	4°05′ × 3°05′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	315 × 230
		TELE	62 × 47
	1/4"	WIDE	230 × 170
		TELE	47 × 35
Back Focal Distance (in air) (mm)			10.00
Exit Pupil Position (From Image Plane) (mm)			292
Filter Thread (mm)			—
Mount			CS
Mass (g)			100
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			・With Metal Mount (*1) When power is turned off, iris will automatically close. YV10×5B-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



VARI-FOCAL LENSES

DV5×3.6R4B-SA2

Applicable camera (model)

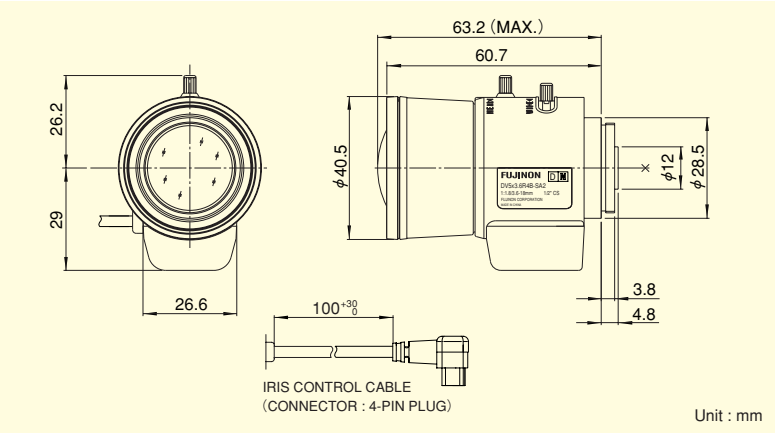
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | Day~Night Day & Night | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | 230 Long Cable | AT Aspherical Lens

5×

*Photograph is a similar model.

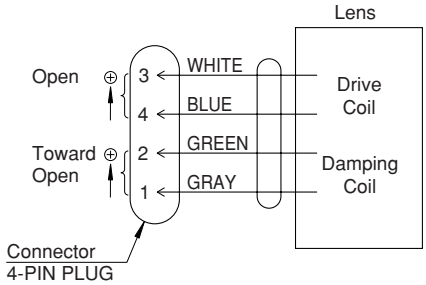
- Advanced design engineering and special optic glass adopted, best suited for color, Black and White and Day and Night cameras.
- Compatible with a wide range - 1/2", 1/3" and 1/4" - cameras.
- Broad range of f3.6-18mm, supporting various applications.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.



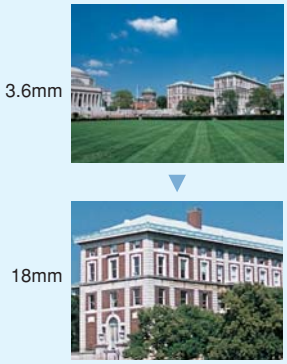
Unit : mm

Focal Length (mm)			3.6~18 (5×)
Iris Range			F1.8 ~ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/2"	WIDE	95°54′ × 72°24′
		TELE	19°57′ × 15°09′
	1/3"	WIDE	72°24′ × 54°25′
		TELE	15°09′ × 11°26′
	1/4"	WIDE	54°25′ × 40°50′
		TELE	11°26′ × 8°37′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	694 × 457
		TELE	110 × 83
	1/3"	WIDE	457 × 321
		TELE	83 × 62
	1/4"	WIDE	321 × 232
		TELE	62 × 47
Back Focal Distance (in air) (mm)			7.87
Exit Pupil Position (From Image Plane) (mm)			−81
Filter Thread (mm)			—
Mount			CS
Mass (g)			75
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. DV5×3.6R4B-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



VARI-FOCAL LENSES

DV10×7B-SA2

Applicable camera (model)

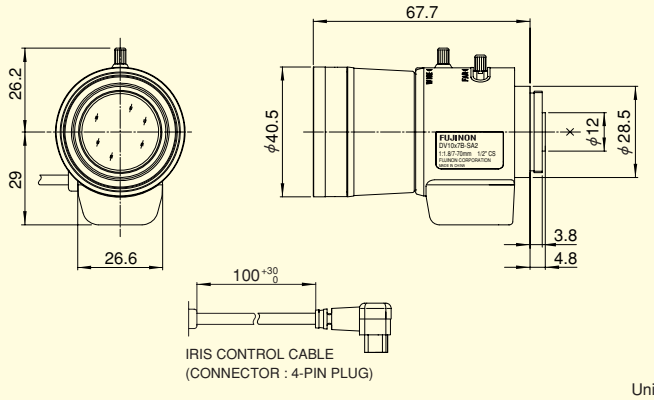
1 | 2/3 | 1/2 | 1/3 | 1/4

VARI Vari-Focal | WIDE Wide Angle | TELE Telephoto Long Focal | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | 230 Long Cable | AT Aspherical Lens

10×

*Photograph is a similar model.

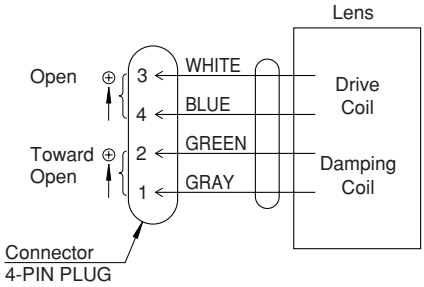
- Compatible with a wide range - 1/2", 1/3" and 1/4" - cameras.
- Broad range of f7-70mm, supporting various applications.
- High accuracy aspheric lens adopted, achieving the high quality image.
- Built-in ND filter of T360, supporting high sensitivity cameras.



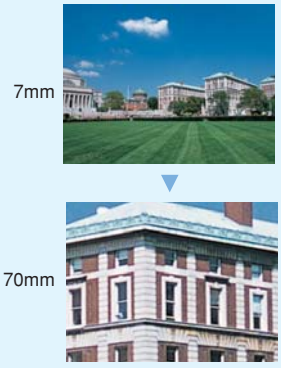
Unit : mm

Focal Length (mm)			7～70 (10×)
Iris Range			F1.8 ～ T360 (Equivalent to F360)
Operation	Zoom		Manual
	Focus		Manual
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/2"	WIDE	50°01′ × 38°12′
		TELE	5°12′ × 3°59′
	1/3"	WIDE	38°12′ × 28°56′
		TELE	3°59′ × 3°02′
	1/4"	WIDE	28°56′ × 21°49′
		TELE	3°02′ × 2°17′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 0.3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	301 × 223
		TELE	60 × 46
	1/3"	WIDE	223 × 166
		TELE	46 × 35
	1/4"	WIDE	166 × 124
		TELE	35 × 26
Back Focal Distance (in air) (mm)			7.90
Exit Pupil Position (From Image Plane) (mm)			−62
Filter Thread (mm)			—
Mount			CS
Mass (g)			100
Coil Resistance			Drive Coil 190Ω Damping Coil 500Ω
Current Consumption			23mA (Max.) at DC 4V
Remarks			・With Metal Mount (*1) When power is turned off, iris will automatically close. DV10×7B-SA2L : Long Cable Type (230mm)

Wiring



[Lens Image]



VARI-FOCAL LENSES

Y12×6A-SE2

Applicable camera (model)

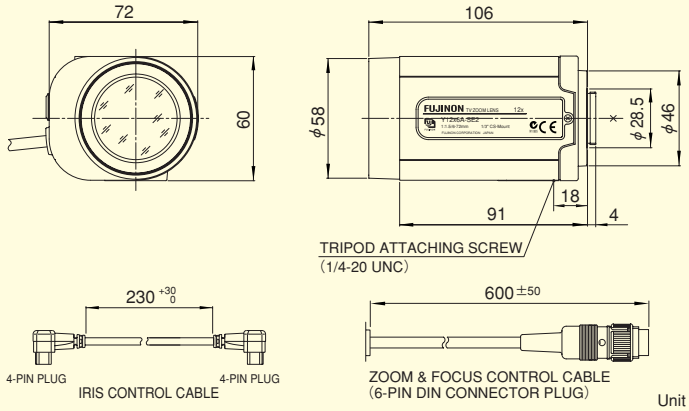
1 | 2/3 | 1/2 | 1/3 | 1/4

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | F1.5 Wide Aperture Rate

12×

*Photograph is a similar model.

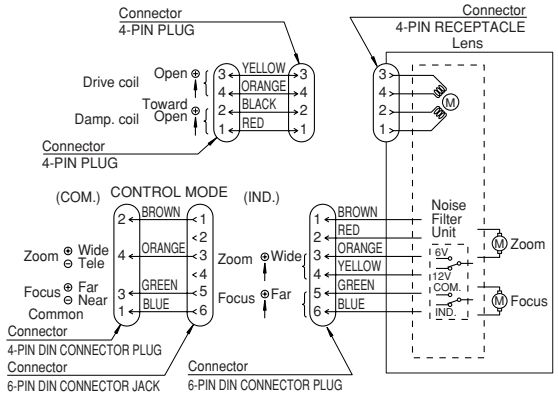
- High standard zoom lens with excellent cost performance.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Built-in ND filter of T400, supporting high sensitivity cameras.



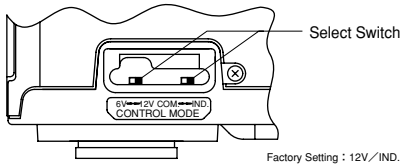
Unit : mm

Focal Length (mm)			6~72 (12×)
Iris Range			F1.5 ~ T400 (Equivalent to F400)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	43°36′ × 33°24′
		TELE	3°49′ × 2°52′
	1/4"	WIDE	33°24′ × 25°22′
		TELE	2°52′ × 2°09′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 1.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	1003 × 753
		TELE	84 × 63
	1/4"	WIDE	752 × 565
		TELE	63 × 47
Back Focal Distance (in air) (mm)			11.69
Exit Pupil Position (From Image Plane) (mm)			−6028
Filter Thread (mm)			M55 × 0.75
Mount			CS
Mass (g)			330
Coil Resistance			Drive Coil 180Ω Damping Coil 720Ω
Current Consumption			22mA (Max.) at DC 4V
Standard Accessories			Iris Control Cable Conversion Cable (6-pin→4-pin) Connection Connector (4-pin, 6-pin)
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close.

Wiring



Control Mode (Top View)



Factory Setting : 12V/IND.

Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Close-up Lens

Product Name			CL3355 (M55×0.75mm fc=333mm)	CL10055 (M55×0.75mm fc=1000mm)
Imaging Area (mm)			333~265	1000~565
Object Dimensions (mm)	1/3"	WIDE	204×153	436×327
		TELE	17×13	36×27
	1/4"	WIDE	153×115	327×245
		TELE	13×10	27×20

ZOOM LENSES

Y12×6A-YE2

Applicable camera (model)

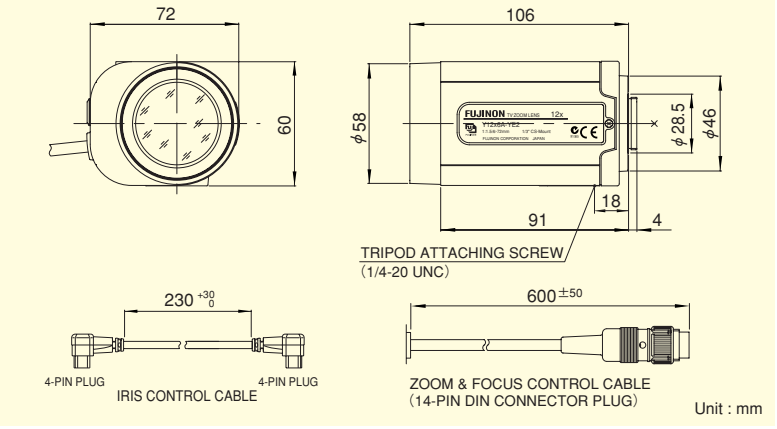
1 | 2/3 | 1/2 | 1/3 | 1/4

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount
PRESET Potentio Meter | N D ND Filter | F1.5 Wide Aperture Rate

12×

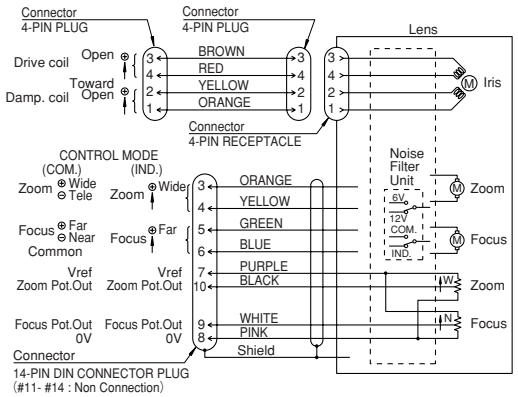
*Photograph is a similar model.

- High standard zoom lens with excellent cost performance.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Built-in potentio meter, supporting the preset-enabled specification.
- Built-in ND filter of T400, supporting high sensitivity cameras.

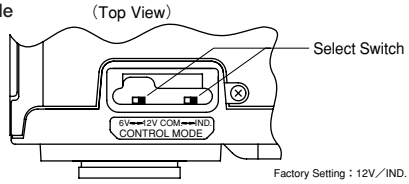


Focal Length (mm)			6～72 (12×)
Iris Range			F1.5 ～ T400 (Equivalent to F400)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/3"	WIDE	43°36′ × 33°24′
		TELE	3°49′ × 2°52′
	1/4"	WIDE	33°24′ × 25°22′
		TELE	2°52′ × 2°09′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 1.3
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	WIDE	1003 × 753
		TELE	84 × 63
	1/4"	WIDE	752 × 565
		TELE	63 × 47
Back Focal Distance (in air) (mm)			11.69
Exit Pupil Position (From Image Plane) (mm)			−6028
Filter Thread (mm)			M55 × 0.75
Mount			CS
Mass (g)			350
Coil Resistance			Drive Coil 180Ω Damping Coil 720Ω
Current Consumption			22mA (Max.) at DC 4V
Standard Accessories			Iris Control Cable Connection Connector (10-pin)
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close.

Wiring



Control Mode (Top View)



Factory Setting : 12V/IND.

Controller output	Select switch position
6V	6V/IND.
±6V	6V/COM.
12V	12V/IND.
±12V	12V/COM.

Accessories

■Close-up Lens

Product Name			CL3355 (M55×0.75mm fc=333mm)	CL10055 (M55×0.75mm fc=1000mm)
Imaging Area (mm)			333～265	1000～565
Object Dimensions (mm)	1/3"	WIDE	204×153	436×327
		TELE	17×13	36×27
	1/4"	WIDE	153×115	327×245
		TELE	13×10	27×20

MP MEGA PIXELS D8×7.8HA-SE2

Applicable camera (model)

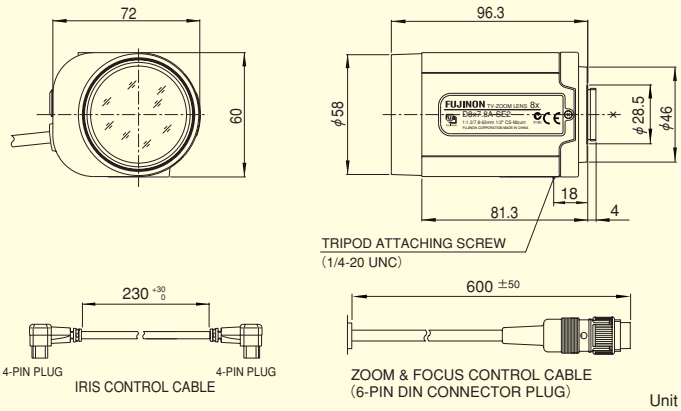
1 | 2/3 | 1/2 | 1/3 | 1/4

8×

ZOOM Zoom | WIDE Wide Angle | MOTOR DRIVE Motor Drive | 1.3 Mega For Megapixel Camera | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter | F1.2 Wide Aperture Rate

*Photograph is a similar model.

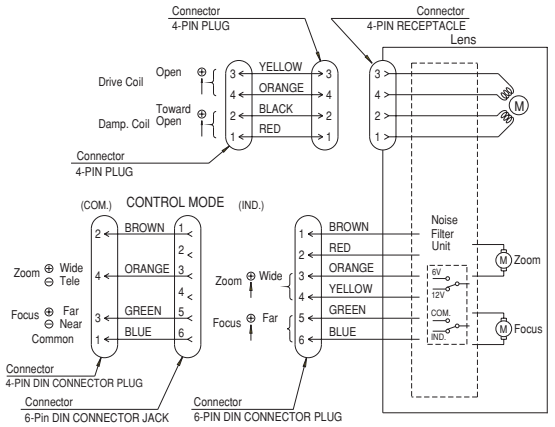
- Standard zoom lens with excellent cost performance.
- High image-quality monitoring with optical performance supporting 1.3 megapixels.
- Wide aperture of F1.2, providing optimal performance under low light intensity.
- Compact and lightweight design, allowing easy storage into small housings.
- Built-in ND filter of T400, providing support for high sensitivity cameras.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.



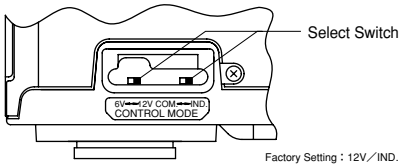
Unit : mm

Focal Length (mm)			7.8~63 (8×)
Iris Range			F1.2 ~ T400 (Equivalent to F400)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/2"	WIDE	44°37′ × 34°12′
		TELE	5°49′ × 4°22′
	1/3"	WIDE	34°12′ × 25°59′
		TELE	4°22′ × 3°16′
	1/4"	WIDE	25°59′ × 19°38′
		TELE	3°16′ × 2°27′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 1.2
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	944 × 708
		TELE	117 × 88
	1/3"	WIDE	708 × 531
		TELE	88 × 66
	1/4"	WIDE	531 × 398
		TELE	66 × 49
Back Focal Distance (in air) (mm)			14.00
Exit Pupil Position (From Image Plane) (mm)			−55
Filter Thread (mm)			M55 × 0.75
Mount			CS
Mass (g)			400
Coil Resistance			Drive Coil 200Ω Damping Coil 700Ω
Current Consumption			22mA (Max.) at DC 4V
Standard Accessories			Iris Control Cable Conversion Cable (6-pin→4-pin) Connection Connector (4-pin, 6-pin)
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close.

Wiring



Control Mode (Top View)



Factory Setting : 12V/IND.

Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Close-up Lens

Product Name			CL3355 (M55×0.75mm fc=333mm)	CL10055 (M55×0.75mm fc=1000mm)
Imaging Area (mm)			333~261	1000~545
Object Dimensions (mm)	1/2"	WIDE	205×153	428×321
		TELE	25×19	53×40
	1/3"	WIDE	153×115	321×241
		TELE	19×14	40×30
	1/4"	WIDE	115×86	241×181
		TELE	14×11	30×22

MP MEGA PIXELS D8×7.8HA-YE2

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

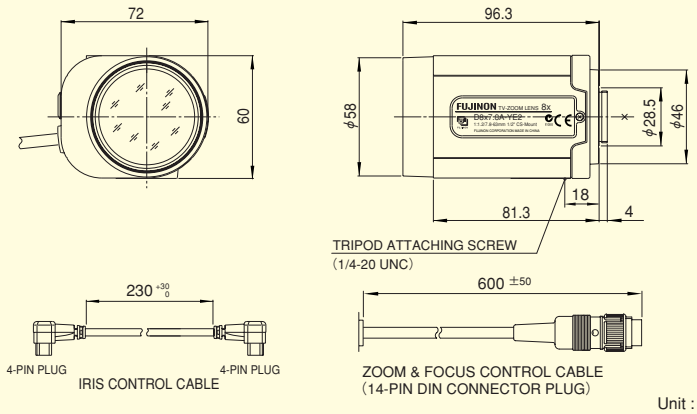
8×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | MOTOR DRIVE Motor Drive | 1.3 Mega For Megapixel Camera | DC Auto Iris | CS-mt CS Mount | METAL Metal Mount

PRESET Potentio Meter | N D ND Filter | F1.2 Wide Aperture Rate

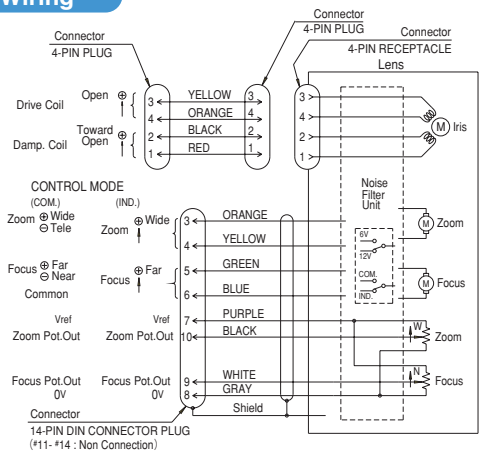
- Standard zoom lens with excellent cost performance.
- High image-quality monitoring with optical performance supporting 1.3 megapixels.
- Wide aperture of F1.2, providing optimal performance under low light intensity.
- Compact and lightweight design, allowing easy storage into small housings.
- Built-in ND filter of T400, providing support for high sensitivity cameras.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.



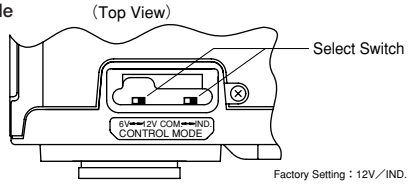
Unit : mm

Focal Length (mm)			7.8～63 (8×)
Iris Range			F1.2 ～ T400 (Equivalent to F400)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/2"	WIDE	44°37′ × 34°12′
		TELE	5°49′ × 4°22′
	1/3"	WIDE	34°12′ × 25°59′
		TELE	4°22′ × 3°16′
	1/4"	WIDE	25°59′ × 19°38′
		TELE	3°16′ × 2°27′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 1.2
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	944 × 708
		TELE	117 × 88
	1/3"	WIDE	708 × 531
		TELE	88 × 66
	1/4"	WIDE	531 × 398
		TELE	66 × 49
Back Focal Distance (in air) (mm)			14.00
Exit Pupil Position (From Image Plane) (mm)			−55
Filter Thread (mm)			M55 × 0.75
Mount			CS
Mass (g)			400
Coil Resistance			Drive Coil 200Ω Damping Coil 700Ω
Current Consumption			22mA (Max.) at DC 4V
Standard Accessories			Iris Control Cable Connection Connector (10-pin)
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close.

Wiring



Control Mode (Top View)



Factory Setting : 12V／IND.

Controller output	Select switch position
6V	6V／IND.
±6V	6V／COM.
12V	12V／IND.
±12V	12V／COM.

Accessories

■Close-up Lens

Product Name			CL3355 (M55×0.75mm fc=333mm)	CL10055 (M55×0.75mm fc=1000mm)
Imaging Area (mm)			333～261	1000～545
Object Dimensions (mm)	1/2"	WIDE	205×153	428×321
		TELE	25×19	53×40
	1/3"	WIDE	153×115	321×241
		TELE	19×14	40×30
	1/4"	WIDE	115×86	241×181
		TELE	14×11	30×22

D12×8A-SE2

Applicable camera (model)

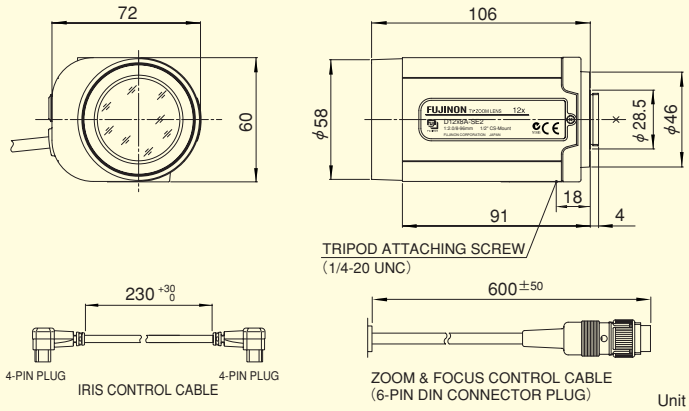
1 | 2/3 | 1/2 | 1/3 | 1/4

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | ND ND Filter

12×

*Photograph is a similar model.

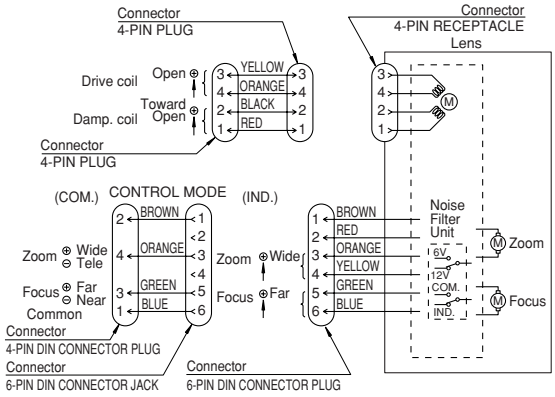
- High standard zoom lens with excellent cost performance.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Built-in ND filter of T400, supporting high sensitivity cameras.



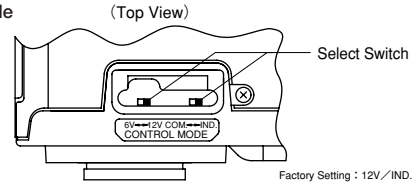
Unit : mm

Focal Length (mm)			8～96 (12×)
Iris Range			F2.0 ～ T400 (Equivalent to F400)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/2"	WIDE	43°36′ × 33°24′
		TELE	3°49′ × 2°52′
	1/3"	WIDE	33°24′ × 25°22′
		TELE	2°52′ × 2°09′
	1/4"	WIDE	25°22′ × 19°09′
		TELE	2°09′ × 1°37′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 1.3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	1003 × 753
		TELE	84 × 63
	1/3"	WIDE	752 × 565
		TELE	63 × 47
	1/4"	WIDE	564 × 424
		TELE	47 × 35
Back Focal Distance (in air) (mm)			16.22
Exit Pupil Position (From Image Plane) (mm)			−51
Filter Thread (mm)			M55 × 0.75
Mount			CS
Mass (g)			330
Coil Resistance			Drive Coil 180Ω Damping Coil 720Ω
Current Consumption			22mA (Max.) at DC 4V
Standard Accessories			Iris Control Cable Conversion Cable (6-pin→4-pin) Connection Connector (4-pin, 6-pin)
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close.

Wiring



Control Mode (Top View)



Factory Setting : 12V/IND.

Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Close-up Lens

Product Name			CL3355 (M55×0.75mm fc=333mm)	CL10055 (M55×0.75mm fc=1000mm)
Imaging Area (mm)			333～250	1000～500
Object Dimensions (mm)	1/2"	WIDE	204×153	436×327
		TELE	17×13	36×27
	1/3"	WIDE	153×115	327×245
		TELE	13×10	27×20
	1/4"	WIDE	115×86	245×184
		TELE	10×7	20×15

ZOOM LENSES

D12×8A-YE2

Applicable camera (model)

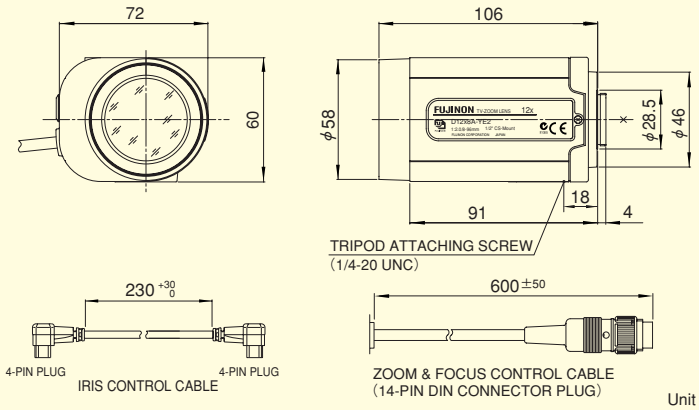
1 | 2/3 | 1/2 | 1/3 | 1/4

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | DC DC Auto Iris | CS-mt CS Mount | METAL Metal Mount | PRESET Potentio Meter | N D ND Filter

12×

*Photograph is a similar model.

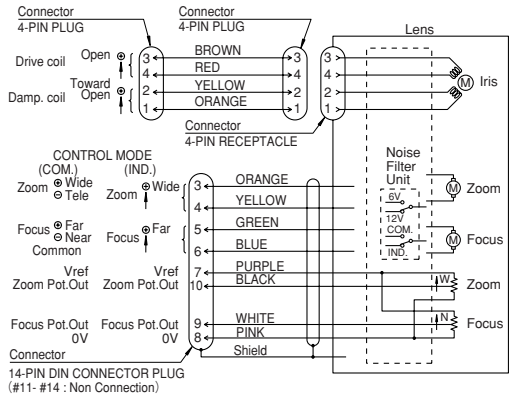
- High standard zoom lens with excellent cost performance.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Built-in potentio meter, supporting the preset-enabled specification.
- Built-in ND filter of T400, supporting high sensitivity cameras



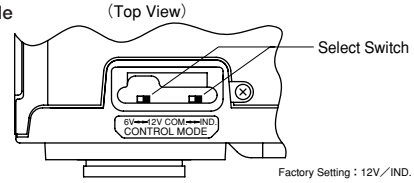
Unit : mm

Focal Length (mm)			8～96 (12×)
Iris Range			F2.0 ～ T400 (Equivalent to F400)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (DC Type) (*1)
Angle Of View (H×V)	1/2"	WIDE	43°36′ × 33°24′
		TELE	3°49′ × 2°52′
	1/3"	WIDE	33°24′ × 25°22′
		TELE	2°52′ × 2°09′
	1/4"	WIDE	25°22′ × 19°09′
		TELE	2°09′ × 1°37′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 1.3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	1003 × 753
		TELE	84 × 63
	1/3"	WIDE	752 × 565
		TELE	63 × 47
	1/4"	WIDE	564 × 424
		TELE	47 × 35
Back Focal Distance (in air) (mm)			16.22
Exit Pupil Position (From Image Plane) (mm)			−51
Filter Thread (mm)			M55 × 0.75
Mount			CS
Mass (g)			350
Coil Resistance			Drive Coil 180Ω Damping Coil 720Ω
Current Consumption			22mA (Max.) at DC 4V
Standard Accessories			Iris Control Cable Connection Connector (10-pin)
Remarks			・With Metal Mount (*1) When power is turned off, iris will automatically close.

Wiring



Control Mode (Top View)



Factory Setting : 12V／IND.

Controller output	Select switch position
6V	6V／IND.
±6V	6V／COM.
12V	12V／IND.
±12V	12V／COM.

Accessories

■Close-up Lens

Product Name			CL3355 (M55×0.75mm fc=333mm)	CL10055 (M55×0.75mm fc=1000mm)
Imaging Area (mm)			333～250	1000～500
Object Dimensions (mm)	1/2"	WIDE	204×153	436×327
		TELE	17×13	36×27
	1/3"	WIDE	153×115	327×245
		TELE	13×10	27×20
	1/4"	WIDE	115×86	245×184
		TELE	10×7	20×15

MP MEGA PIXELS

D8×7.8HA-V42

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

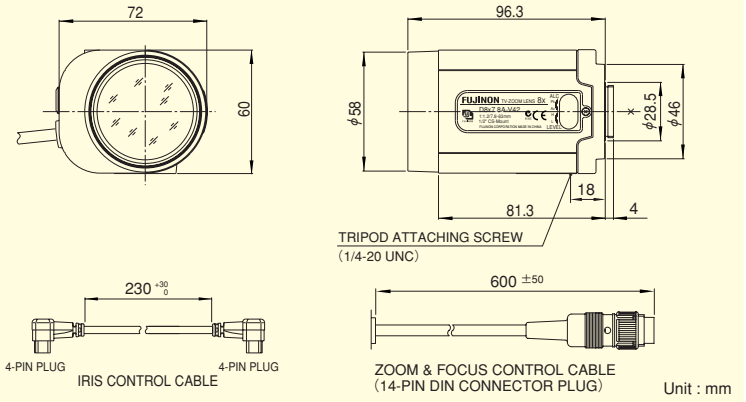
8×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | MOTOR DRIVE Motor Drive | 1.3 Mega For Megapixel Camera | VIDEO Video Auto Iris | IRIS-REMOTE Iris Remote | CS-mt CS Mount

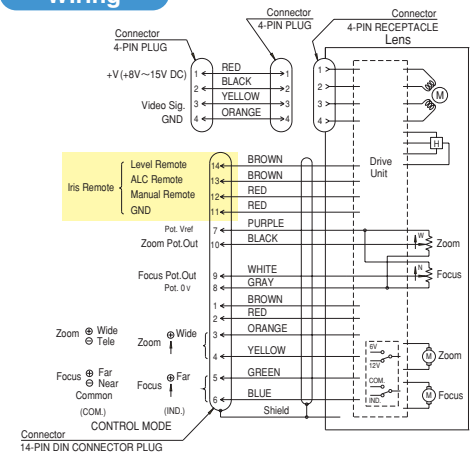
METAL Metal Mount | PRESET Potentio Meter | N D ND Filter | F1.2 Wide Aperture Rate

- Standard zoom lens with excellent cost performance.
- High image-quality monitoring with optical performance supporting 1.3 megapixels.
- Wide aperture of F1.2, providing optimal performance under low light intensity.
- Compact and lightweight design, allowing easy storage into small housings.
- Built-in ND filter of T400, providing support for high sensitivity cameras.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Auto iris is remotely operable, allowing light intensity to be fine adjusted according to the monitoring target.

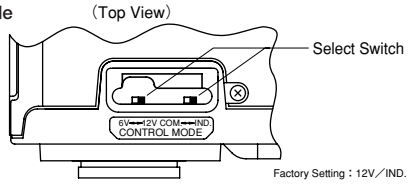


Focal Length (mm)			7.8～63 (8×)
Iris Range			F1.2 ～ T400 (Equivalent to F400)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type) or Remote (*1)
Angle Of View (H×V)	1/2"	WIDE	44°37′ × 34°12′
		TELE	5°49′ × 4°22′
	1/3"	WIDE	34°12′ × 25°59′
		TELE	4°22′ × 3°16′
	1/4"	WIDE	25°59′ × 19°38′
		TELE	3°16′ × 2°27′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 1.2
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	944 × 708
		TELE	117 × 88
	1/3"	WIDE	708 × 531
		TELE	88 × 66
	1/4"	WIDE	531 × 398
		TELE	66 × 49
Back Focal Distance (in air) (mm)			14.00
Exit Pupil Position (From Image Plane) (mm)			−55
Filter Thread (mm)			M55 × 0.75
Mount			CS
Mass (g)			400
Standard Accessories			Iris Control Cable Connection Connector (14-pin)
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close.

Wiring



Control Mode (Top View)



Factory Setting : 12V／IND.

Controller output	Select switch position
6V	6V／IND.
±6V	6V／COM.
12V	12V／IND.
±12V	12V／COM.

Accessories

■Close-up Lens

Product Name			CL3355 (M55×0.75mm fc=333mm)	CL10055 (M55×0.75mm fc=1000mm)
Imaging Area (mm)			333～261	1000～545
Object Dimensions (mm)	1/2"	WIDE	205×153	428×321
		TELE	25×19	53×40
	1/3"	WIDE	153×115	321×241
		TELE	19×14	40×30
	1/4"	WIDE	115×86	241×181
		TELE	14×11	30×22

H22×11.5A-M41

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

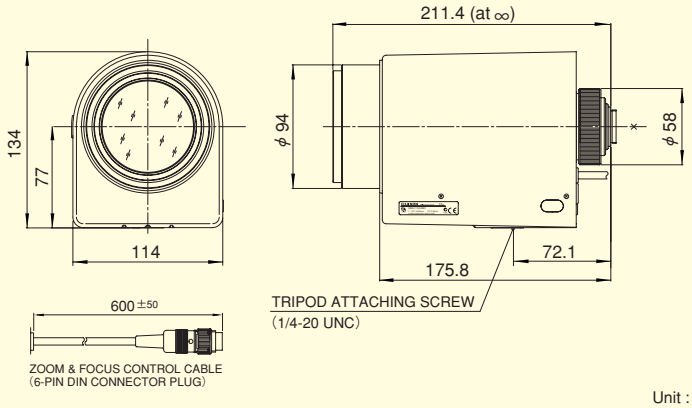
ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | REMOTE Remote Iris | C-mt C Mount | METAL Metal Mount

F1.6 Wide Aperture Rate

22×

*Photograph is a similar model.

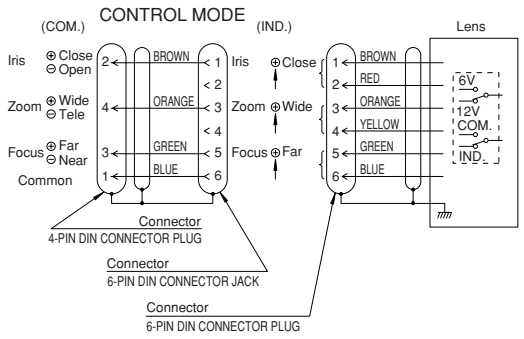
- High-power zoom lens covering wide angle and telephoto.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Compatible with a wide range - 2/3", 1/2" and 1/3" - cameras.



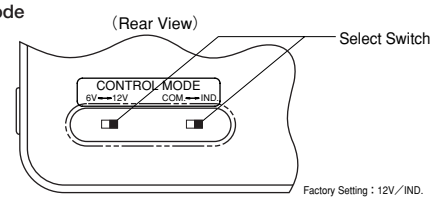
Unit : mm

Focal Length (mm)			11.5~253 (22×)
Iris Range			F1.6 ~ F22 · Close
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Motor Drive
Angle Of View (H×V)	2/3"	WIDE	41°52′ × 32°01′
		TELE	2°00′ × 1°30′
	1/2"	WIDE	31°06′ × 23°34′
		TELE	1°27′ × 1°05′
	1/3"	WIDE	23°34′ × 17°47′
		TELE	1°05′ × 0°49′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	WIDE	2213 × 1660
		TELE	101 × 75
	1/2"	WIDE	1609 × 1207
		TELE	73 × 55
	1/3"	WIDE	1207 × 905
		TELE	55 × 41
Back Focal Distance (in air) (mm)			35.95
Exit Pupil Position (From Image Plane) (mm)			−103
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.3
Standard Accessories			Conversion Cable (6-pin→4-pin) Connection Connector (4-pin, 6-pin)
Remarks			· With Metal Mount

Wiring



Control Mode



Factory Setting : 12V/IND.

Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Extender

Product Name	Magnification
HE15-1	1.5×
HE20-1	2×

TELEPHOTO ZOOM LENSES

C22×17A-M41

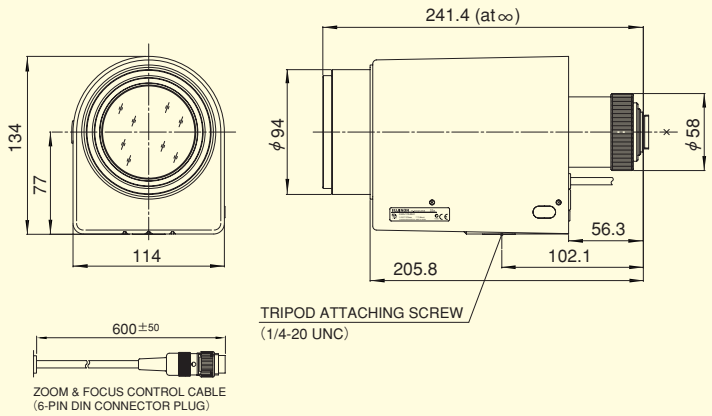
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | REMOTE Remote Iris | C-mt C Mount | METAL Metal Mount

22×

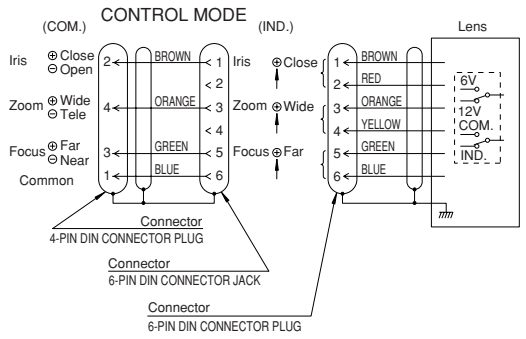
- Achieved telephoto at the field angle of 0˚59′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Compatible with a wide range - 1", 2/3", 1/2" and 1/3" - cameras.



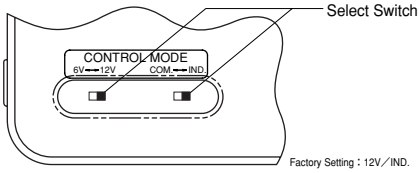
Unit : mm

Focal Length (mm)			17～374 (22×)
Iris Range			F2.3 ～ F22・Close
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Motor Drive
Angle Of View (H×V)	1"	WIDE	41˚16′ × 31˚32′
		TELE	1˚58′ × 1˚28′
	2/3"	WIDE	29˚01′ × 21˚58′
		TELE	1˚21′ × 1˚01′
	1/2"	WIDE	21˚19′ × 16˚04′
		TELE	0˚59′ × 0˚44′
	1/3"	WIDE	16˚04′ × 12˚05′
		TELE	0˚44′ × 0˚33′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	2178 × 1633
		TELE	99 × 74
	2/3"	WIDE	1497 × 1123
		TELE	68 × 51
	1/2"	WIDE	1089 × 817
		TELE	50 × 37
	1/3"	WIDE	817 × 613
		TELE	37 × 28
Back Focal Distance (in air) (mm)			66.93
Exit Pupil Position (From Image Plane) (mm)			−127
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.3
Standard Accessories			Conversion Cable (6-pin→4-pin) Connection Connector (4-pin, 6-pin)
Remarks			・With Metal Mount

Wiring



Control Mode (Rear View)



Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Extender

Product Name	Magnification
HE15-1	1.5×
HE20-1	2×

C22×23A-M41

Applicable camera (model)

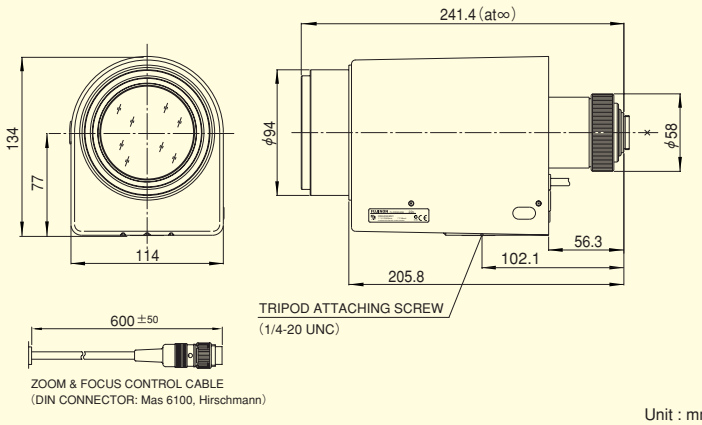
1 | 2/3 | 1/2 | 1/3 | 1/4

22×

ZOOM Zoom | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | REMOTE Remote Iris | C-mt C Mount | METAL Metal Mount

*Photograph is a similar model.

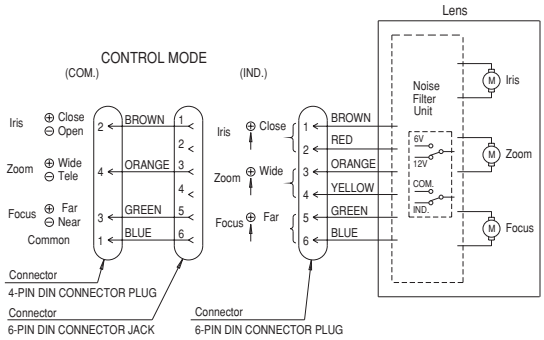
- High-power zoom lens with focal length of 500mm, best suited for remote surveillance.
- Compact and lightweight design, allowing compact systems to be established with ease.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Supports 1" II tube cameras.



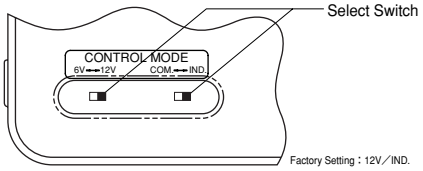
Unit : mm

Focal Length (mm)			23～506 (22×)
Iris Range			F3.1 ～ F22・Close
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Motor Drive
Angle Of View (H×V)	1"	WIDE	31°06′ × 23°35′
		TELE	1°27′ × 1°05′
	2/3"	WIDE	21°40′ × 16°20′
		TELE	1°00′ × 0°45′
	1/2"	WIDE	15°50′ × 11°55′
		TELE	0°43′ × 0°33′
	1/3"	WIDE	11°55′ × 8°57′
		TELE	0°32′ × 0°24′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	1611 × 1208
		TELE	73 × 55
	2/3"	WIDE	1108 × 831
		TELE	50 × 38
	1/2"	WIDE	806 × 604
		TELE	37 × 27
	1/3"	WIDE	604 × 453
		TELE	27 × 21
Back Focal Distance (in air) (mm)			39.54
Exit Pupil Position (From Image Plane) (mm)			−64
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.4
Standard Accessories			Conversion Cable (6-pin→4-pin) Connection Connector (4-pin, 6-pin)
Remarks			・With Metal Mount

Wiring



Control Mode (Rear View)



Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Extender

Product Name	Magnification
HE15-1	1.5×
HE20-1	2×

For Surveillance
Telephoto Zoom

D22×9.1B-S41

Applicable camera (model)

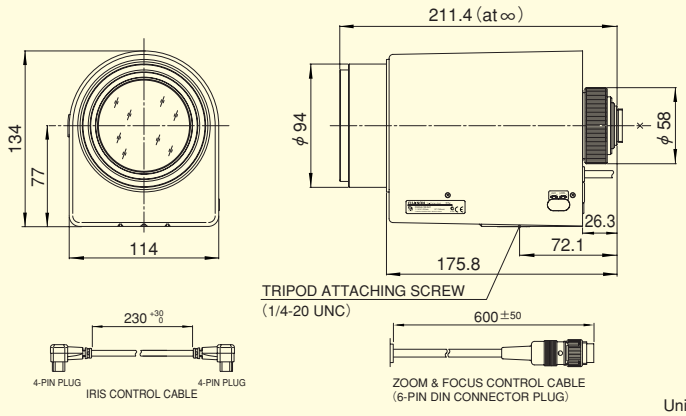
1 | 2/3 | 1/2 | 1/3 | 1/4

22×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | VIDEO Video Auto Iris | C-mt C Mount | METAL Metal Mount | N D ND Filter | F1.2 Wide Aperture Rate

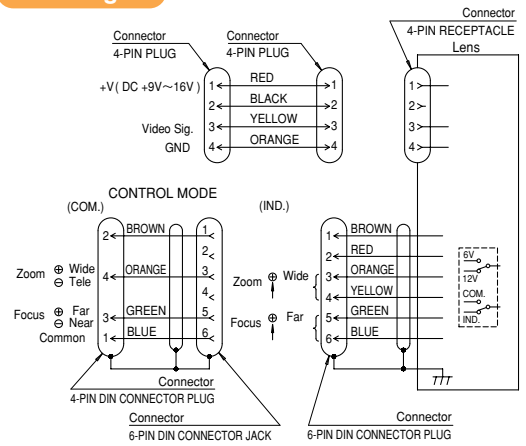
- Achieved telephoto at the field angle of 1˚50′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- With the amazing brightness of F1.2, reproducing excellent image quality over the entire visible light range.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Compatible with a wide range - 1/2", 1/3" and 1/4" - cameras.
- Built-in ND filter of T1500, supporting high sensitivity cameras.



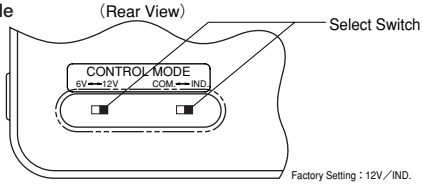
Unit : mm

Focal Length (mm)			9.1～200 (22×)
Iris Range			F1.2 ～ T1500 (Equivalent to F1500)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type)
Angle Of View (H×V)	1/2"	WIDE	38˚45′ × 29˚33′
		TELE	1˚50′ × 1˚23′
	1/3"	WIDE	29˚33′ × 22˚23′
		TELE	1˚23′ × 1˚02′
	1/4"	WIDE	22˚23′ × 16˚53′
		TELE	1˚02′ × 0˚46′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	2034 × 1526
		TELE	93 × 69
	1/3"	WIDE	1526 × 1144
		TELE	69 × 52
	1/4"	WIDE	1144 × 858
		TELE	52 × 39
Back Focal Distance (in air) (mm)			23.93
Exit Pupil Position (From Image Plane) (mm)			−676
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.3
Standard Accessories			Iris Control Cable Conversion Cable (6-pin→4-pin) Connection Connector (4-pin, 6-pin)
Remarks			・With Metal Mount

Wiring



Control Mode (Rear View)



Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Extender

Product Name	Magnification
HE15-1	1.5×
HE20-1	2×

D22×9.1B-Y41

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

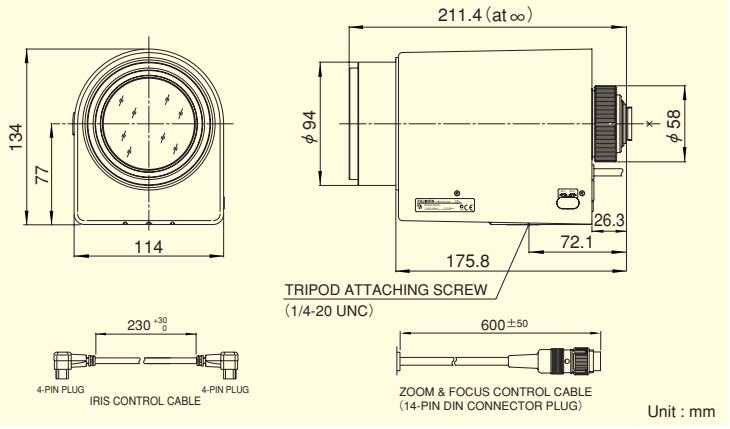
22×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | VIDEO Video Auto Iris | C-mt C Mount | METAL Metal Mount

PRESET Potentio Meter | N D ND Filter | F1.2 Wide Aperture Rate

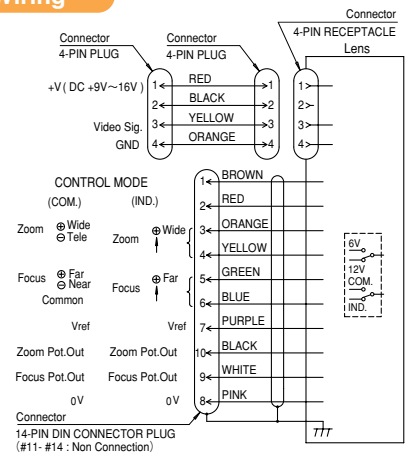
- Achieved telephoto at the field angle of 1°50′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- With the amazing brightness of F1.2, reproducing excellent image quality over the entire visible light range.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Built-in potentio meter, supporting preset.
- Compatible with a wide range - 1/2", 1/3" and 1/4" - cameras.
- Built-in ND filter of T1500, supporting high sensitivity cameras.



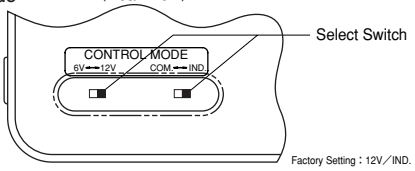
Unit : mm

Focal Length (mm)			9.1～200 (22×)
Iris Range			F1.2 ～ T1500 (Equivalent to F1500)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type)
Angle Of View (H×V)	1/2"	WIDE	38°45′ × 29°33′
		TELE	1°50′ × 1°23′
	1/3"	WIDE	29°33′ × 22°23′
		TELE	1°23′ × 1°02′
	1/4"	WIDE	22°23′ × 16°53′
		TELE	1°02′ × 0°46′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	2034 × 1526
		TELE	93 × 69
	1/3"	WIDE	1526 × 1144
		TELE	69 × 52
	1/4"	WIDE	1144 × 858
		TELE	52 × 39
Back Focal Distance (in air) (mm)			23.93
Exit Pupil Position (From Image Plane) (mm)			−676
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.3
Standard Accessories			Iris Control Cable Connection Connector (14-pin)
Remarks			• With Metal Mount

Wiring



Control Mode (Rear View)



Controller output	Select switch position
6V	6V/IND.
±6V	6V/COM.
12V	12V/IND.
±12V	12V/COM.

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

TELEPHOTO ZOOM LENSES

MP MEGA PIXELS D32×10HR4D-V41

Applicable camera (model)

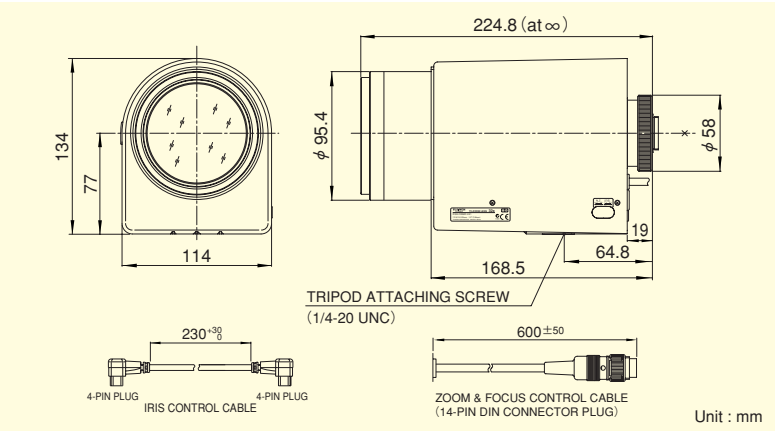
1 | 2/3 | 1/2 | 1/3 | 1/4

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | 1.3 Mega For Megapixel Camera | VIDEO Video Auto Iris

IRIS-REMOTE Iris Remote | C-mt C Mount | METAL Metal Mount | PRESET Potentio Meter | N D ND Filter

32×

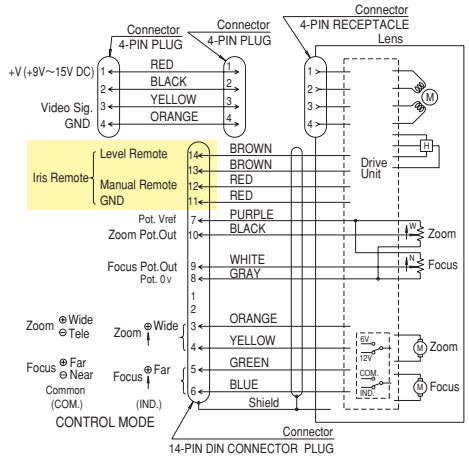
- Optically corrected 32x telephoto zoom lens best suited for day and night cameras.
- High-resolution design, providing support for up to 1.3 megapixel camera resolution.
- Realized a light and compact design for condensed system.
- Multi-power compatibility for connection to existing surveillance systems for zoom operation.
- Iris override function allows manual iris adjustment.



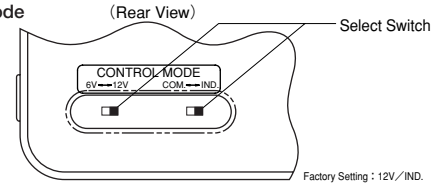
Unit : mm

Focal Length (mm)			10~320 (32×)
Iris Range			F2.5 ~ T1500 (Equivalent to F1500)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type), or Remote (*1) (*2)
Angle Of View (H×V)	1/2"	WIDE	35°29′ × 26°59′
		TELE	1°09′ × 0°52′
	1/3"	WIDE	26°59′ × 20°24′
		TELE	0°52′ × 0°39′
	1/4"	WIDE	20°24′ × 15°23′
		TELE	0°39′ × 0°29′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	1746 × 1310
		TELE	57 × 43
	1/3"	WIDE	1310 × 982
		TELE	43 × 32
	1/4"	WIDE	982 × 737
		TELE	32 × 24
Back Focal Distance (in air) (mm)			22.70
Exit Pupil Position (From Image Plane) (mm)			−53
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.5
Standard Accessories			Iris Control Cable Connection Connector (14-pin)
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. (*2) For Iris remote function please refer to page (J-1).

Wiring



Control Mode (Rear View)



Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

MP MEGA PIXELS D32×10HR4D-YE1

Applicable camera (model)

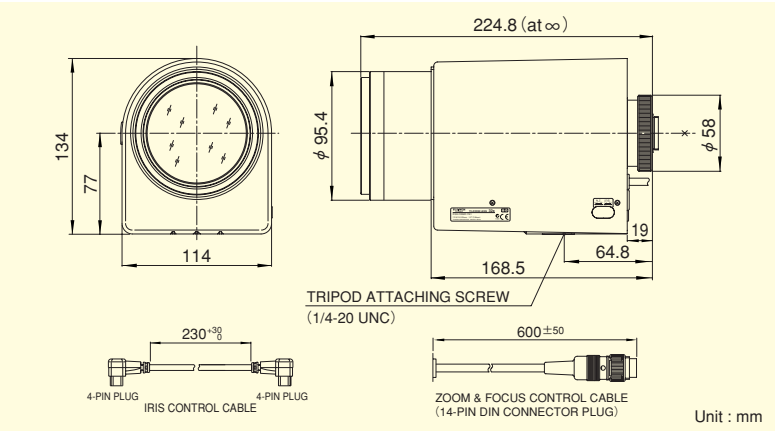
1 | 2/3 | 1/2 | 1/3 | 1/4

32×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | 1.3 Mega For Megapixel Camera | DC DC Auto Iris | C-mt C Mount | METAL Metal Mount | PRESET Potentio Meter | ND ND Filter

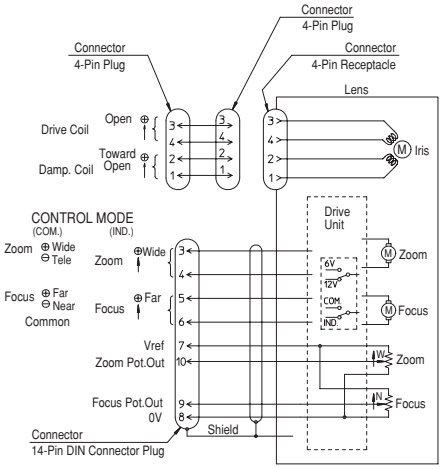
- Optically corrected 32x telephoto zoom lens best suited for day and night cameras.
- High-resolution design, providing support for up to 1.3 megapixel camera resolution.
- Realized a light and compact design for condensed system.
- Multi-power compatibility for connection to existing surveillance systems for zoom operation.



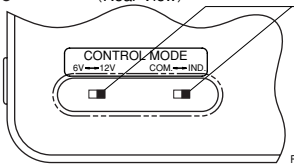
Unit : mm

Focal Length (mm)			10~320 (32×)
Iris Range			F2.5 ~ T1500 (Equivalent to F1500)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (DC) (*1)
Angle Of View (H×V)	1/2"	WIDE	35°29′ × 26°59′
		TELE	1°09′ × 0°52′
	1/3"	WIDE	26°59′ × 20°24′
		TELE	0°52′ × 0°39′
	1/4"	WIDE	20°24′ × 15°23′
		TELE	0°39′ × 0°29′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	1746 × 1310
		TELE	57 × 43
	1/3"	WIDE	1310 × 982
		TELE	43 × 32
	1/4"	WIDE	982 × 737
		TELE	32 × 24
Back Focal Distance (in air) (mm)			22.70
Exit Pupil Position (From Image Plane) (mm)			−53
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.5
Standard Accessories			Iris Control Cable Connection Connector (14-pin)
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close.

Wiring



Control Mode (Rear View) Select Switch



Factory Setting : 12V/IND.

Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

H22×11.5B-S41

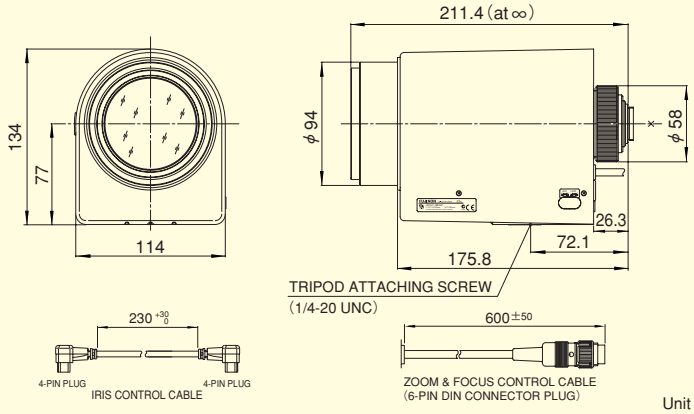
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | VIDEO Video Auto Iris | C-mt C Mount | METAL Metal Mount | N D ND Filter | F1.6 Wide Aperture Rate

22×

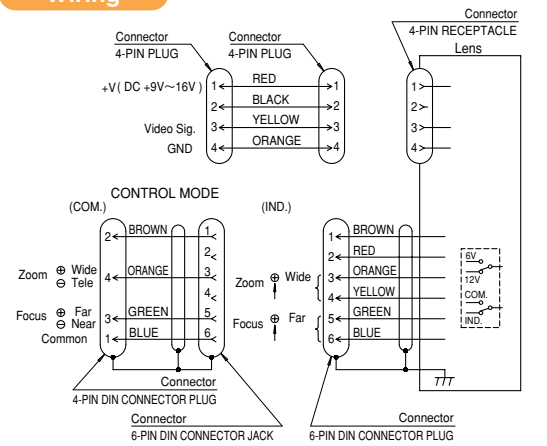
- Achieved telephoto at the field angle of 1˚27′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Compatible with a wide range - 2/3", 1/2" and 1/3" - cameras.
- Built-in ND filter of T2000, supporting high sensitivity cameras.



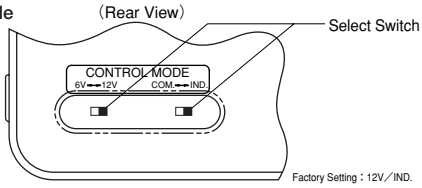
Unit : mm

Focal Length (mm)			11.5~253 (22×)
Iris Range			F1.6 ~ T2000 (Equivalent to F2000)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type)
Angle Of View (H×V)	2/3"	WIDE	41˚52′ × 32˚01′
		TELE	2˚00′ × 1˚30′
	1/2"	WIDE	31˚06′ × 23˚34′
		TELE	1˚27′ × 1˚05′
	1/3"	WIDE	23˚34′ × 17˚47′
		TELE	1˚05′ × 0˚49′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	WIDE	2213 × 1660
		TELE	101 × 75
	1/2"	WIDE	1609 × 1207
		TELE	73 × 55
	1/3"	WIDE	1207 × 905
		TELE	55 × 41
Back Focal Distance (in air) (mm)			36.16
Exit Pupil Position (From Image Plane) (mm)			−103
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.3
Standard Accessories			Iris Control Cable Conversion Cable (6-pin→4-pin) Connection Connector (4-pin, 6-pin)
Remarks			・With Metal Mount

Wiring



Control Mode (Rear View)



Factory Setting : 12V/IND.

Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

H22×11.5B-Y41

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

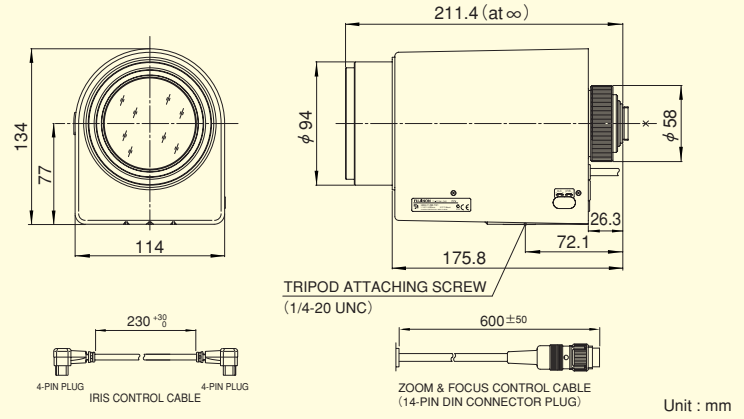
22×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | VIDEO Video Auto Iris | C-mt C Mount | METAL Metal Mount

PRESET Potentio Meter | N D ND Filter | F1.6 Wide Aperture Rate

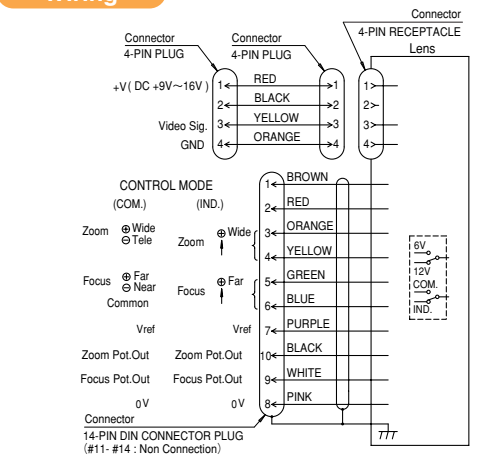
- Achieved telephoto at the field angle of 1°27′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Built-in potentio meter, supporting preset.
- Compatible with a wide range - 2/3", 1/2" and 1/3" - cameras.
- Built-in ND filter of T2000, supporting high sensitivity cameras.



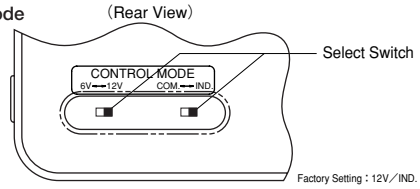
Unit : mm

Focal Length (mm)			11.5~253 (22×)
Iris Range			F1.6 ~ T2000 (Equivalent to F2000)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type)
Angle Of View (H×V)	2/3"	WIDE	41°52′ × 32°01′
		TELE	2°00′ × 1°30′
	1/2"	WIDE	31°06′ × 23°34′
		TELE	1°27′ × 1°05′
	1/3"	WIDE	23°34′ × 17°47′
		TELE	1°05′ × 0°49′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	WIDE	2213 × 1660
		TELE	101 × 75
	1/2"	WIDE	1609 × 1207
		TELE	73 × 55
	1/3"	WIDE	1207 × 905
		TELE	55 × 41
Back Focal Distance (in air) (mm)			36.16
Exit Pupil Position (From Image Plane) (mm)			−103
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.3
Standard Accessories			Iris Control Cable Connection Connector (14-pin)
Remarks			• With Metal Mount

Wiring



Control Mode (Rear View)



Factory Setting : 12V／IND.

Controller output	Select switch position
6V	6V／IND.
±6V	6V／COM.
12V	12V／IND.
±12V	12V／COM.

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

TELEPHOTO ZOOM LENSES

H22×11.5R2D-V41

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

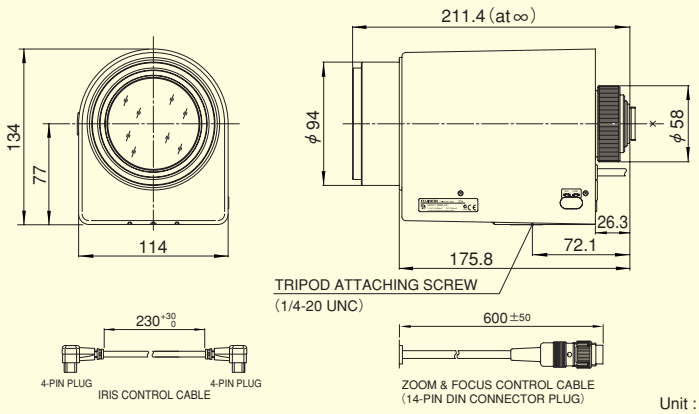
22×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | VIDEO Video Auto Iris | IRIS-REMOTE Iris Remote

C-mt C Mount | METAL Metal Mount | PRESET Potentio Meter | N D ND Filter | F1.6 Wide Aperture Rate

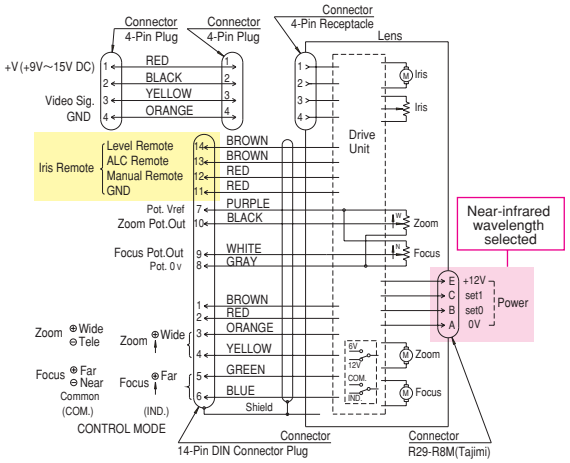
- 22x telephoto zoom lens with near-infrared wavelength selection mechanism, best suited for day and night cameras.
- Achieved telephoto at the field angle of 1˚27′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Auto iris is remotely operable, allowing light intensity to be fine adjusted according to the monitoring target.
- Compatible with a wide range - 2/3", 1/2" and 1/3" - cameras.
- Built-in ND filter of T2000, supporting high sensitivity cameras.



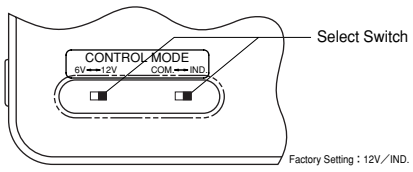
Unit : mm

Focal Length (mm)			11.5~253 (22×)
Iris Range			F1.6 ~ T2000 (Equivalent to F2000)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type) or Remote (*1)
Angle Of View (H×V)	2/3"	WIDE	41˚52′ × 32˚01′
		TELE	2˚00′ × 1˚30′
	1/2"	WIDE	31˚06′ × 23˚34′
		TELE	1˚27′ × 1˚05′
	1/3"	WIDE	23˚34′ × 17˚47′
		TELE	1˚05′ × 0˚49′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	WIDE	2213 × 1660
		TELE	101 × 75
	1/2"	WIDE	1609 × 1207
		TELE	73 × 55
	1/3"	WIDE	1207 × 905
		TELE	55 × 41
Back Focal Distance (in air) (mm)			36.16
Exit Pupil Position (From Image Plane) (mm)			−103
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.5
Standard Accessories			Iris Control Cable Connection Connector (14-pin,8-pin)
Remarks			• With Metal Mount (*1) For Iris remote function please refer to page (J-1)

Wiring



Control Mode (Rear View)



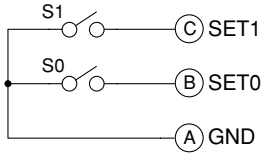
Controller output	Select switch position
6V	6V/IND.
±6V	6V/COM.
12V	12V/IND.
±12V	12V/COM.

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

Near-infrared wavelength selected



		S0	S1
Visible light		OFF	OFF
Near-infrared light	850nm	ON	OFF
	880nm	OFF	ON
	950nm	ON	ON

H22×11.5R2D-ZP1

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

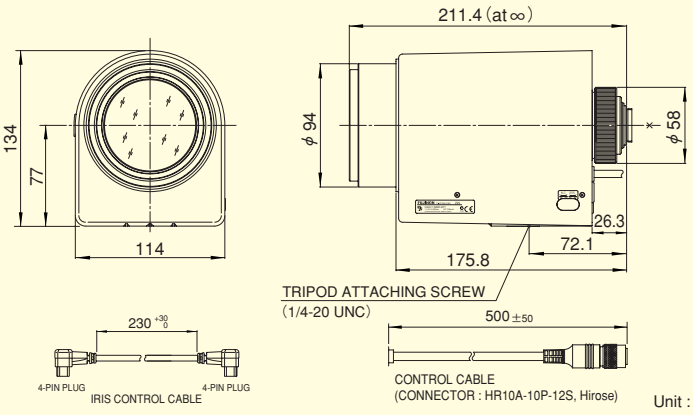
22×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | VIDEO Video Auto Iris | IRIS-REMOTE Iris Remote

C-mt C Mount | METAL Metal Mount | P C PC Control | SERVO Full Servo | N D ND Filter | F1.6 Wide Aperture Rate

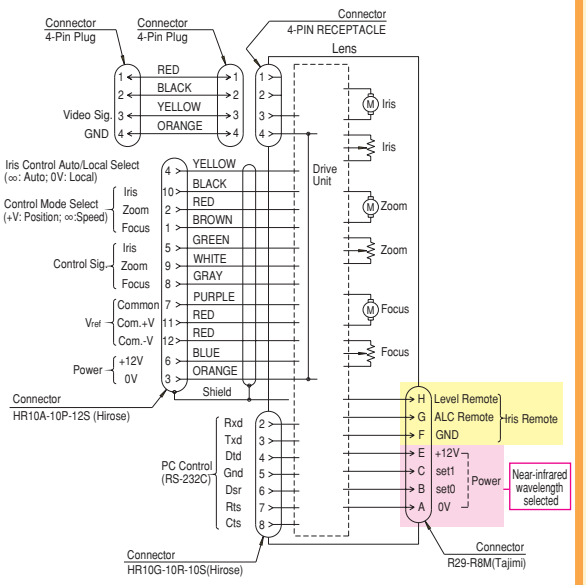
- 22x telephoto zoom lens with near-infrared wavelength selection mechanism, best suited for day and night cameras.
- Achieved telephoto at the field angle of 1˚27′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- Equipped with the RS-232C interface for advanced control.
- Compatible with a wide range - 2/3", 1/2" and 1/3" - cameras.



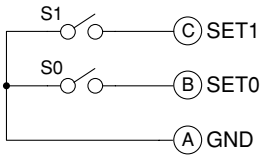
Unit : mm

Focal Length (mm)			11.5~253 (22×)
Iris Range			F1.6 ~ T2000 (Equivalent to F2000)
Operation	Zoom		Servo Control
	Focus		Servo Control
	Iris		Auto (Video Type), Remote (*1) or Servo Control
Angle Of View (H×V)	2/3"	WIDE	41˚52′ × 32˚01′
		TELE	2˚00′ × 1˚30′
	1/2"	WIDE	31˚06′ × 23˚34′
		TELE	1˚27′ × 1˚05′
	1/3"	WIDE	23˚34′ × 17˚47′
		TELE	1˚05′ × 0˚49′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	WIDE	2213 × 1660
		TELE	101 × 75
	1/2"	WIDE	1609 × 1207
		TELE	73 × 55
	1/3"	WIDE	1207 × 905
		TELE	55 × 41
Back Focal Distance (in air) (mm)			36.16
Exit Pupil Position (From Image Plane) (mm)			−103
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.5
Standard Accessories			Iris Control Cable Connection Connector (8-pin)
Remarks			・With Metal Mount (*1) For Iris remote function please refer to page (J-1)

Wiring



Near-infrared wavelength selected



		S0	S1
Visible light		OFF	OFF
Near-infrared light	850nm	ON	OFF
	880nm	OFF	ON
	950nm	ON	ON

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

For Surveillance
Telephoto Zoom

C22×17B-S41

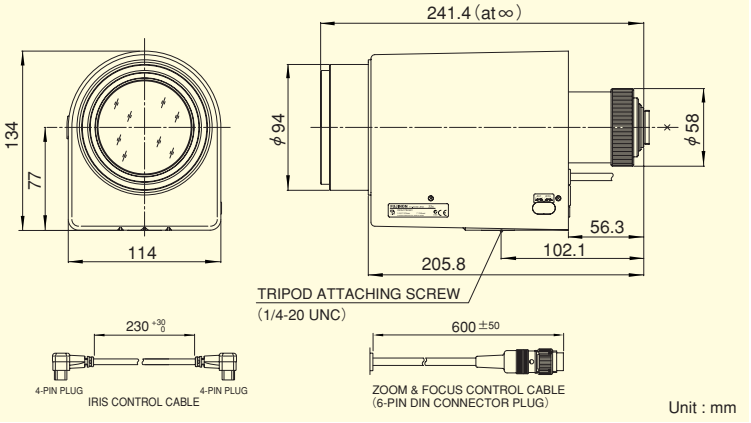
Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | VIDEO Video Auto Iris | C-mt C Mount | METAL Metal Mount | ND ND Filter

22×

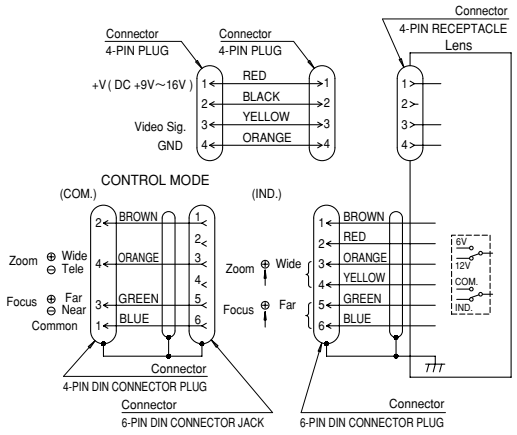
- Achieved super telephoto at the field angle of 0˚59′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Compatible with a wide range - 1", 2/3", 1/2" and 1/3" - cameras.
- Built-in ND filter of T3000, supporting high sensitivity cameras.



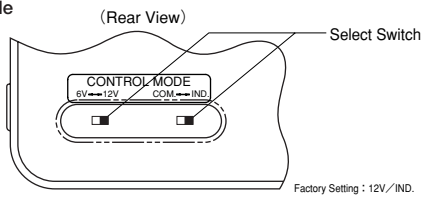
Unit : mm

Focal Length (mm)			17～374 (22×)
Iris Range			F2.3 ～ T3000 (Equivalent to F3000)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type)
Angle Of View (H×V)	1"	WIDE	41˚16′ × 31˚32′
		TELE	1˚58′ × 1˚28′
	2/3"	WIDE	29˚01′ × 21˚58′
		TELE	1˚21′ × 1˚01′
	1/2"	WIDE	21˚19′ × 16˚04′
		TELE	0˚59′ × 0˚44′
	1/3"	WIDE	16˚04′ × 12˚05′
		TELE	0˚44′ × 0˚33′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	2178 × 1633
		TELE	99 × 74
	2/3"	WIDE	1497 × 1123
		TELE	68 × 51
	1/2"	WIDE	1089 × 817
		TELE	50 × 37
	1/3"	WIDE	817 × 613
		TELE	37 × 28
Back Focal Distance (in air) (mm)			67.38
Exit Pupil Position (From Image Plane) (mm)			−127
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.5
Standard Accessories			Iris Control Cable Conversion Cable (6-pin→4-pin) Connection Connector (4-pin, 6-pin)
Remarks			・With Metal Mount

Wiring



Control Mode



Factory Setting : 12V／IND.

Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V／IND.	Not necessary
±6V	6V／COM.	Necessary
12V	12V／IND.	Not necessary
±12V	12V／COM.	Necessary

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

TELEPHOTO ZOOM LENSES

C22×17B-Y41

Applicable camera (model)

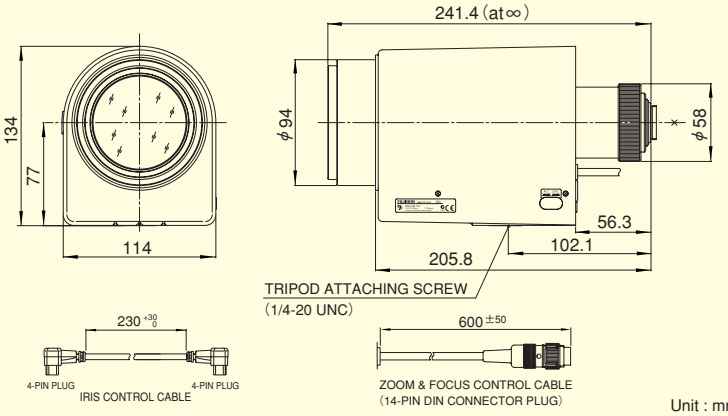
1 | 2/3 | 1/2 | 1/3 | 1/4

22×

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | VIDEO Video Auto Iris | C-mt C Mount | METAL Metal Mount | PRESET Potentio Meter | N D ND Filter

*Photograph is a similar model.

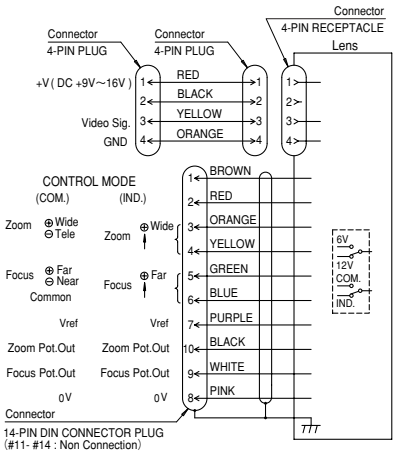
- Achieved telephoto at the field angle of 0°59′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Built-in potentio meter, supporting preset.
- Compatible with a wide range - 1", 2/3", 1/2" and 1/3" - cameras.
- Built-in ND filter of T3000, supporting high sensitivity cameras.



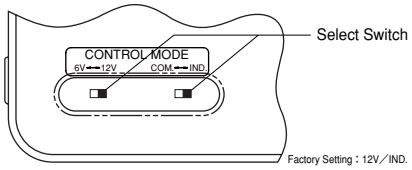
Unit : mm

Focal Length (mm)			17～374 (22×)
Iris Range			F2.3 ～ T3000 (Equivalent to F3000)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type)
Angle Of View (H×V)	1"	WIDE	41°16′ × 31°32′
		TELE	1°58′ × 1°28′
	2/3"	WIDE	29°01′ × 21°58′
		TELE	1°21′ × 1°01′
	1/2"	WIDE	21°19′ × 16°04′
		TELE	0°59′ × 0°44′
	1/3"	WIDE	16°04′ × 12°05′
		TELE	0°44′ × 0°33′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	2178 × 1633
		TELE	99 × 74
	2/3"	WIDE	1497 × 1123
		TELE	68 × 51
	1/2"	WIDE	1089 × 817
		TELE	50 × 37
	1/3"	WIDE	817 × 613
		TELE	37 × 28
Back Focal Distance (in air) (mm)			67.38
Exit Pupil Position (From Image Plane) (mm)			−127
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.5
Standard Accessories			Iris Control Cable
Remarks			・With Metal Mount

Wiring



Control Mode (Rear View)



Controller output	Select switch position
6V	6V／IND.
±6V	6V／COM.
12V	12V／IND.
±12V	12V／COM.

Accessories

■Extender	Magnification
Model	1.5×
HE15-1	2×
HE20-1	

TELEPHOTO ZOOM LENSES

C22×17R2D-V41

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

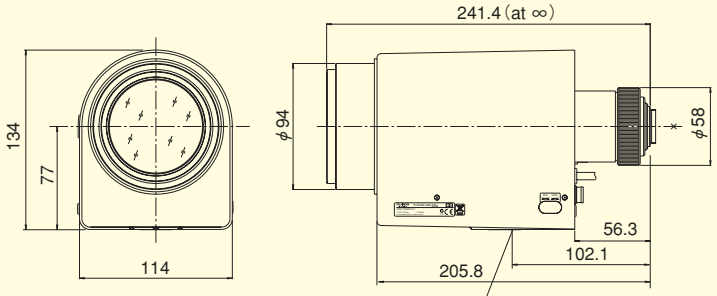
22×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | VIDEO Video Auto Iris | IRIS-REMOTE Iris Remote

C-mt C Mount | METAL Metal Mount | PRESET Potentio Meter | N D ND Filter

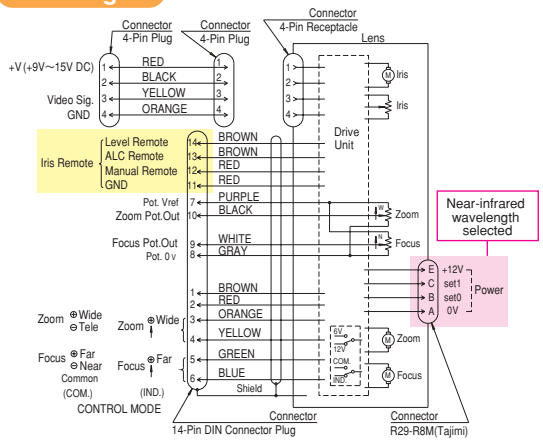
- Zoom lens with near-infrared wavelength selection mechanism, best suited for day and night cameras.
- Achieved telephoto at the field angle of 0˚59′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- Compact and lightweight design, allowing compact systems to be easily established.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Special built-in ND filter of T3000, providing support for ultra sensitive cameras.
- Auto iris is remotely operable, allowing light intensity to be fine adjusted according to the monitoring target.
- Supports 1" photomultiplier tube cameras.



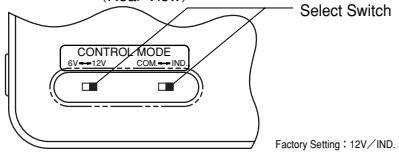
Unit : mm

Focal Length (mm)			17~374 (22×)
Iris Range			F2.3 ~ T3000 (Equivalent to F3000)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type) or Remote (*1)
Angle Of View (H×V)	1"	WIDE	41˚16′ × 31˚32′
		TELE	1˚58′ × 1˚28′
	2/3"	WIDE	29˚01′ × 21˚58′
		TELE	1˚21′ × 1˚01′
	1/2"	WIDE	21˚19′ × 16˚04′
		TELE	0˚59′ × 0˚44′
	1/3"	WIDE	16˚04′ × 12˚05′
		TELE	0˚44′ × 0˚33′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	2178 × 1633
		TELE	99 × 74
	2/3"	WIDE	1497 × 1123
		TELE	68 × 51
	1/2"	WIDE	1089 × 817
		TELE	50 × 37
	1/3"	WIDE	817 × 613
		TELE	37 × 28
Back Focal Distance (in air) (mm)			67.38
Exit Pupil Position (From Image Plane) (mm)			−127
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.3
Standard Accessories			Iris Control Cable Connection Connector (14-pin, 8-pin)
Remarks			• With Metal Mount (*1) For Iris remote function please refer to page (J-1)

Wiring



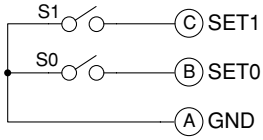
Control Mode (Rear View)



Factory Setting : 12V/IND.

Controller output	Select switch position
6V	6V/IND.
±6V	6V/COM.
12V	12V/IND.
±12V	12V/COM.

Near-infrared wavelength selected



		S0	S1
Visible light		OFF	OFF
Near-infrared light	850nm	ON	OFF
	880nm	OFF	ON
	950nm	ON	ON

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

C22×17R3J-SSF

Applicable camera (model)

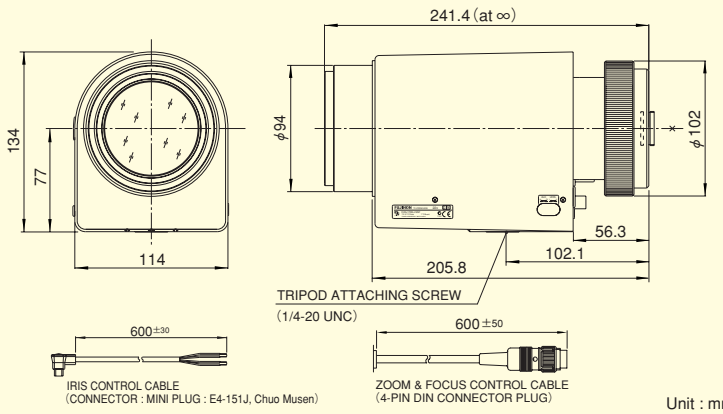
1 | 2/3 | 1/2 | 1/3 | 1/4

22×

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | VIDEO Video Auto Iris | C-mt C Mount | METAL Metal Mount | N D ND Filter

*Photograph is a similar model.

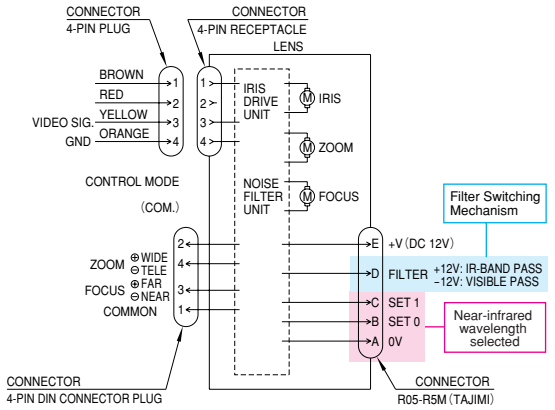
- 22x telephoto zoom lens with near-infrared wavelength selection mechanism, best suited for day and night cameras.
- Equipped with the visible/IR cut filter switch mechanism.
- Achieved telephoto at the field angle of 0°59′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- Compatible with a wide range - 1", 2/3", 1/2" and 1/3" - cameras.



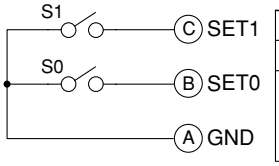
Unit : mm

Focal Length (mm)			17~374 (22×)
Iris Range			F2.3 ~ T3000 (Equivalent to F3000)
Operation		Zoom	Motor Drive
		Focus	Motor Drive
		Iris	Auto (Video Type)
Angle Of View (H×V)	1"	WIDE	41°16′ × 31°32′
		TELE	1°58′ × 1°28′
	2/3"	WIDE	29°01′ × 21°58′
		TELE	1°21′ × 1°01′
	1/2"	WIDE	21°19′ × 16°04′
		TELE	0°59′ × 0°44′
	1/3"	WIDE	16°04′ × 12°05′
		TELE	0°44′ × 0°33′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	2178 × 1633
		TELE	99 × 74
	2/3"	WIDE	1497 × 1123
		TELE	68 × 51
	1/2"	WIDE	1089 × 817
		TELE	50 × 37
	1/3"	WIDE	817 × 613
		TELE	37 × 28
Back Focal Distance (in air) (mm)			67.38
Exit Pupil Position (From Image Plane) (mm)			−127
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.7
Standard Accessories			Iris Control Cable Connection Connector (5-pin)
Remarks			• With Metal Mount

Wiring



Near-infrared wavelength selected



		S0	S1
Visible light		OFF	OFF
Near-infrared light	850nm	ON	OFF
	880nm	OFF	ON
	950nm	ON	ON

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

TELEPHOTO ZOOM LENSES

C22×23B-S41

Applicable camera (model)

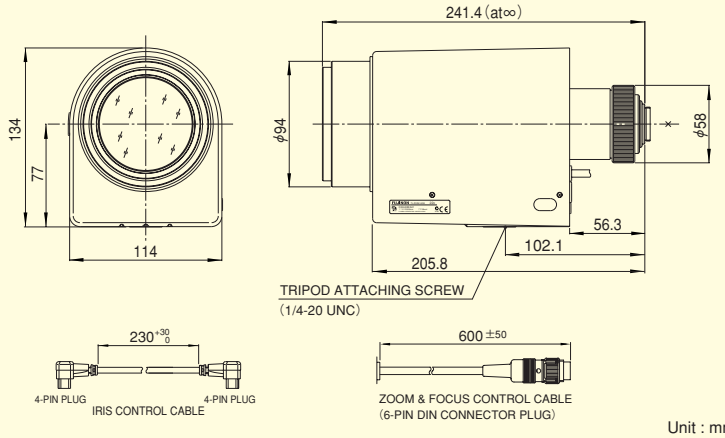
1 | 2/3 | 1/2 | 1/3 | 1/4

ZOOM Zoom | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | VIDEO Video Auto Iris | C-mt C Mount | METAL Metal Mount | N D ND Filter

22×

*Photograph is a similar model.

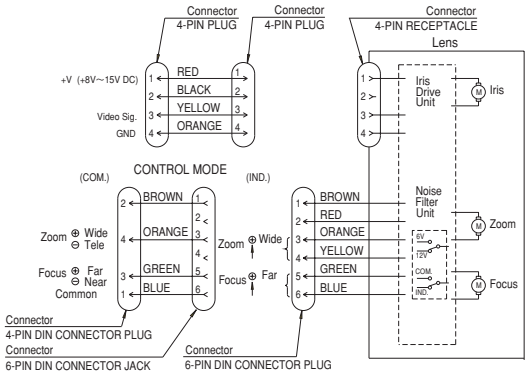
- High-power zoom lens with focal length of 500mm, best suited for remote surveillance.
- Compact and lightweight design, allowing compact systems to be easily established.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Special built-in ND filter of T3000, providing support for ultra sensitive cameras.
- Supports 1" II tube cameras.



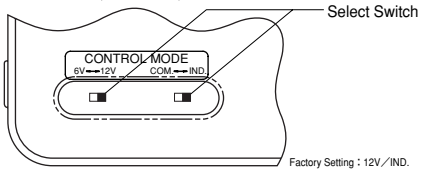
Unit : mm

Focal Length (mm)			23～506 (22×)
Iris Range			F3.1 ～ T3000 (Equivalent to F3000)
Operation		Zoom	Motor Drive
		Focus	Motor Drive
		Iris	Auto (Video Type)
Angle Of View (H×V)	1"	WIDE	31°06′ × 23°35′
		TELE	1°27′ × 1°05′
	2/3"	WIDE	21°40′ × 16°20′
		TELE	1°00′ × 0°45′
	1/2"	WIDE	15°50′ × 11°55′
		TELE	0°43′ × 0°33′
	1/3"	WIDE	11°55′ × 8°57′
		TELE	0°32′ × 0°24′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	1611 × 1208
		TELE	73 × 55
	2/3"	WIDE	1108 × 831
		TELE	50 × 38
	1/2"	WIDE	806 × 604
		TELE	37 × 27
	1/3"	WIDE	604 × 453
		TELE	27 × 21
Back Focal Distance (in air) (mm)			39.54
Exit Pupil Position (From Image Plane) (mm)			−64
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.4
Standard Accessories			Iris Control Cable Conversion Cable (6-pin→4-pin) Connection Connector (4-pin, 6-pin)
Remarks			・With Metal Mount

Wiring



Control Mode (Rear View)



Controller output	Select switch position	Conversion cable (Standard accessory)
6V	6V/IND.	Not necessary
±6V	6V/COM.	Necessary
12V	12V/IND.	Not necessary
±12V	12V/COM.	Necessary

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

C22×23B-Y41

Applicable camera (model)

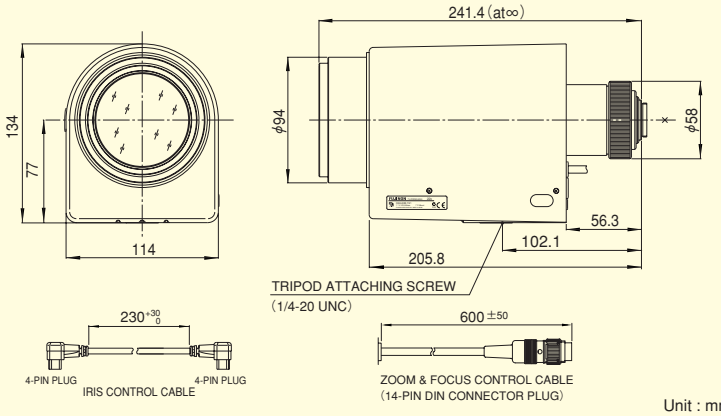
1 | 2/3 | 1/2 | 1/3 | 1/4

22×

ZOOM Zoom | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | VIDEO Video Auto Iris | C-mt C Mount | METAL Metal Mount | PRESET Potentio Meter | ND ND Filter

*Photograph is a similar model.

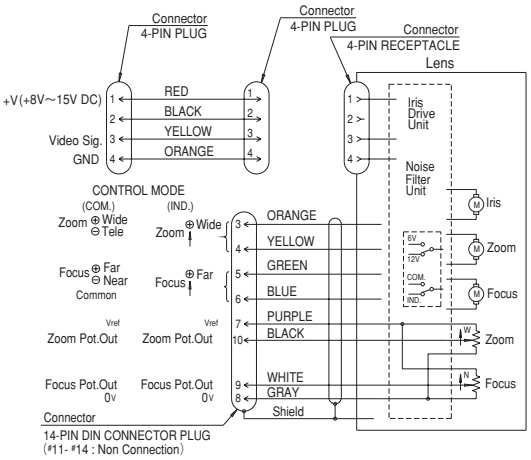
- High-power zoom lens with focal length of 500mm, best suited for remote surveillance.
- Compact and lightweight design, allowing compact systems to be easily established.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Special built-in ND filter of T3000, providing support for ultra sensitive cameras.
- Supports 1" II tube cameras.



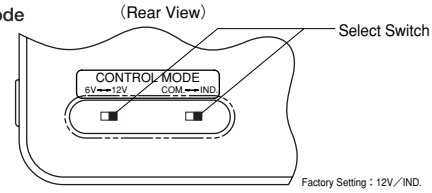
Unit : mm

Focal Length (mm)			23～506 (22×)
Iris Range			F3.1 ～ T3000 (Equivalent to F3000)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type)
Angle Of View (H×V)	1"	WIDE	31°06′ × 23°35′
		TELE	1°27′ × 1°05′
	2/3"	WIDE	21°40′ × 16°20′
		TELE	1°00′ × 0°45′
	1/2"	WIDE	15°50′ × 11°55′
		TELE	0°43′ × 0°33′
	1/3"	WIDE	11°55′ × 8°57′
		TELE	0°32′ × 0°24′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	1611 × 1208
		TELE	73 × 55
	2/3"	WIDE	1108 × 831
		TELE	50 × 38
	1/2"	WIDE	806 × 604
		TELE	37 × 27
	1/3"	WIDE	604 × 453
		TELE	27 × 21
Back Focal Distance (in air) (mm)			39.54
Exit Pupil Position (From Image Plane) (mm)			−64
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.4
Standard Accessories			Iris Control Cable Connection Connector (14-pin)
Remarks			・With Metal Mount

Wiring



Control Mode (Rear View)



Controller output	Select switch position
6V	6V/IND.
±6V	6V/COM.
12V	12V/IND.
±12V	12V/COM.

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

TELEPHOTO ZOOM LENSES

For Surveillance
Telephoto Zoom

C22×23B-V41

Applicable camera (model)

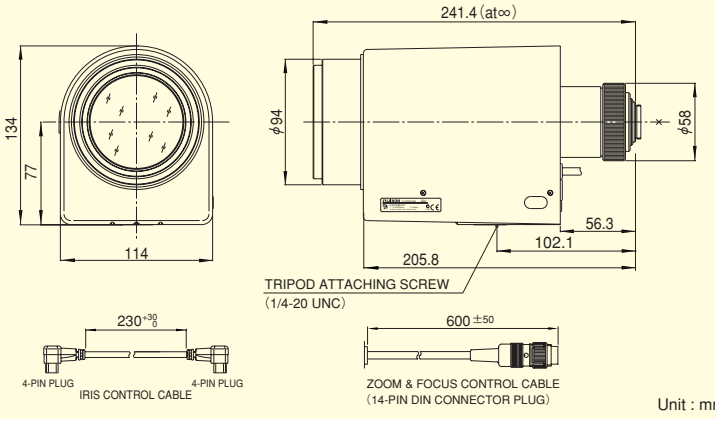
1 | 2/3 | 1/2 | 1/3 | 1/4

ZOOM Zoom
TELE Telephoto Long Focal
MOTOR DRIVE Motor Drive
VIDEO Video Auto Iris
IRIS-REMOTE Iris Remote
C-mt C Mount
METAL Metal Mount
PRESET Potentio Meter
N D ND Filter

22×

*Photograph is a similar model.

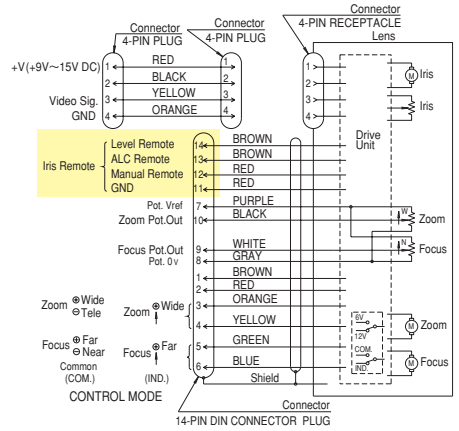
- High-power zoom lens with focal length of 500mm, best suited for remote surveillance.
- Compact and lightweight design, allowing compact systems to be easily established.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Special built-in ND filter of T3000, providing support for ultra sensitive cameras.
- Auto iris is remotely operable, allowing light intensity to be fine adjusted according to the monitoring target.
- Supports 1" II tube cameras.



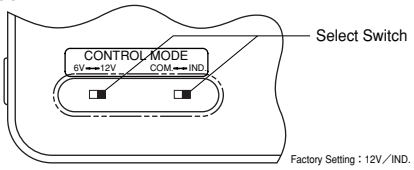
Unit : mm

Focal Length (mm)			23~506 (22×)
Iris Range			F3.1 ~ T3000 (Equivalent to F3000)
Operation		Zoom	Motor Drive
		Focus	Motor Drive
		Iris	Auto (Video Type) or Remote (*1)
Angle Of View (H×V)	1"	WIDE	31°06′ × 23°35′
		TELE	1°27′ × 1°05′
	2/3"	WIDE	21°40′ × 16°20′
		TELE	1°00′ × 0°45′
	1/2"	WIDE	15°50′ × 11°55′
		TELE	0°43′ × 0°33′
	1/3"	WIDE	11°55′ × 8°57′
		TELE	0°32′ × 0°24′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	1611 × 1208
		TELE	73 × 55
	2/3"	WIDE	1108 × 831
		TELE	50 × 38
	1/2"	WIDE	806 × 604
		TELE	37 × 27
	1/3"	WIDE	604 × 453
		TELE	27 × 21
Back Focal Distance (in air) (mm)			39.54
Exit Pupil Position (From Image Plane) (mm)			−64
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.4
Standard Accessories			Iris Control Cable
Remarks			• With Metal Mount (*1) For Iris remote function please refer to page (J-1)

Wiring



Control Mode (Rear View)



Controller output	Select switch position
6V	6V/IND.
±6V	6V/COM.
12V	12V/IND.
±12V	12V/COM.

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

TELEPHOTO ZOOM LENSES

C22×23R2D-V41

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

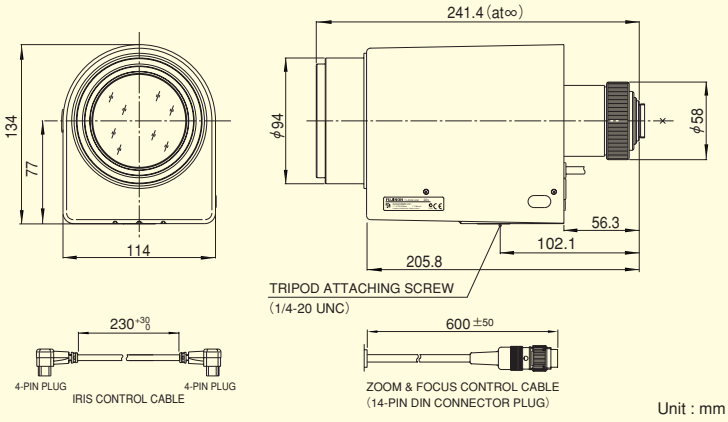
22×

*Photograph is a similar model.

ZOOM Zoom | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | VIDEO Video Auto Iris | IRIS-REMOTE Iris Remote | C-mt C Mount

METAL Metal Mount | PRESET Potentio Meter | N D ND Filter

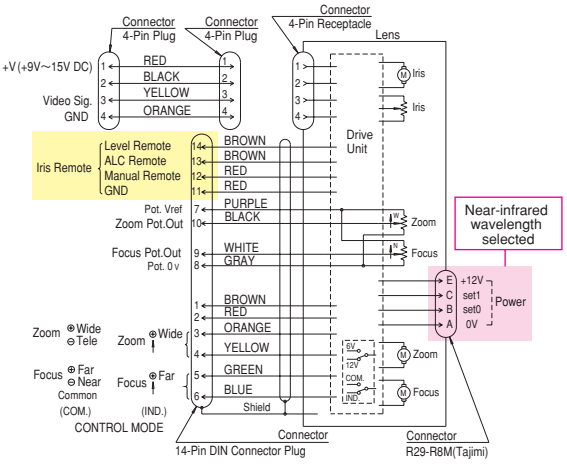
- Zoom lens with near-infrared wavelength selection mechanism, best suited for day and night cameras.
- High-power zoom lens with focal length of 500mm, best suited for remote surveillance.
- Compact and lightweight design, allowing compact systems to be easily established.
- Multi power compatibility (6V, ±6V, 12V, ±12V), for use with existing control systems.
- Special built-in ND filter of T3000, providing support for ultra sensitive cameras.
- Auto iris is remotely operable, allowing light intensity to be fine adjusted according to the monitoring target.
- Supports 1" II tube cameras.



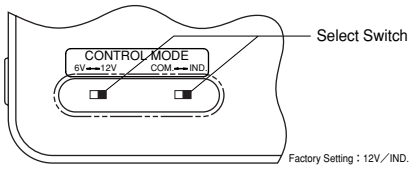
Unit : mm

Focal Length (mm)			23~506 (22×)
Iris Range			F3.1 ~ T3000 (Equivalent to F3000)
Operation	Zoom		Motor Drive
	Focus		Motor Drive
	Iris		Auto (Video Type) or Remote (*1)
Angle Of View (H×V)	1"	WIDE	31°06′ × 23°35′
		TELE	1°27′ × 1°05′
	2/3"	WIDE	21°40′ × 16°20′
		TELE	1°00′ × 0°45′
	1/2"	WIDE	15°50′ × 11°55′
		TELE	0°43′ × 0°33′
	1/3"	WIDE	11°55′ × 8°57′
		TELE	0°32′ × 0°24′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	1611 × 1208
		TELE	73 × 55
	2/3"	WIDE	1108 × 831
		TELE	50 × 38
	1/2"	WIDE	806 × 604
		TELE	37 × 27
	1/3"	WIDE	604 × 453
		TELE	27 × 21
Back Focal Distance (in air) (mm)			39.54
Exit Pupil Position (From Image Plane) (mm)			−64
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.4
Standard Accessories			Iris Control Cable Connection Connector (14-pin,8-pin)
Remarks			• With Metal Mount (*1) For Iris remote function please refer to page (J-1)

Wiring



Control Mode (Rear View)



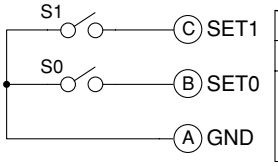
Controller output	Select switch position
6V	6V/IND.
±6V	6V/COM.
12V	12V/IND.
±12V	12V/COM.

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

Near-infrared wavelength selected



		S0	S1
Visible light		OFF	OFF
Near-infrared light	850nm	ON	OFF
	880nm	OFF	ON
	950nm	ON	ON

TELEPHOTO ZOOM LENSES

C22×23R2D-ZP1

Applicable camera (model)

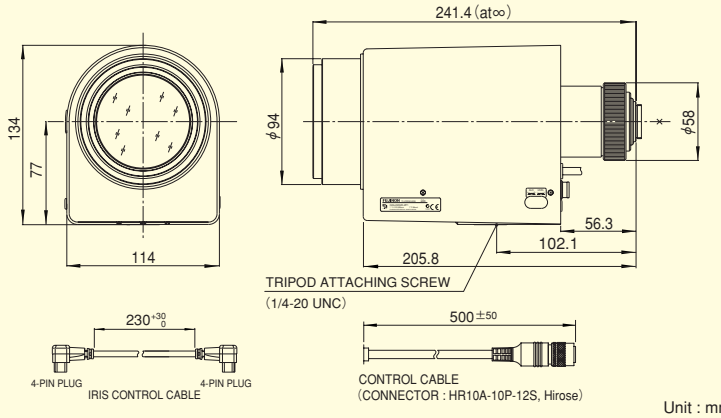
1 | 2/3 | 1/2 | 1/3 | 1/4

22×

*Photograph is a similar model.

ZOOM Zoom | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | VIDEO Video Auto Iris | IRIS-REMOTE Iris Remote | C-mt C Mount
METAL Metal Mount | P C PC Control | SERVO Full Servo | N D ND Filter

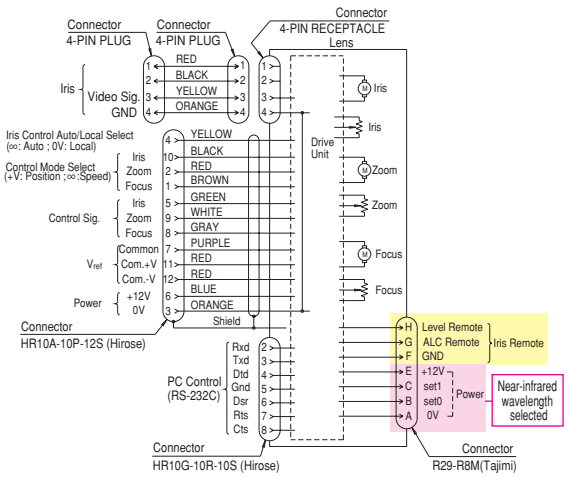
- Zoom lens with near-infrared wavelength selection mechanism, best suited for day and night cameras.
- High-power zoom lens with focal length of 500mm, best suited for remote surveillance.
- Compact and lightweight design, allowing compact systems to be easily established.
- Special built-in ND filter of T3000, providing support for ultra sensitive cameras.
- Equipped with the RS-232C interface for advanced control.
- Auto iris is remotely operable, allowing light intensity to be fine adjusted according to the monitoring target.
- Supports 1" II tube cameras.



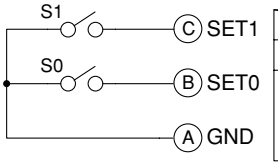
Unit : mm

Focal Length (mm)			23~506 (22×)
Iris Range			F3.1 ~ T3000 (Equivalent to F3000)
Operation	Zoom		Servo Control
	Focus		Servo Control
	Iris		Auto (Video Type), Remote (*1) or Servo Control
Angle Of View (H×V)	1"	WIDE	31°06′ × 23°35′
		TELE	1°27′ × 1°05′
	2/3"	WIDE	21°40′ × 16°20′
		TELE	1°00′ × 0°45′
	1/2"	WIDE	15°50′ × 11°55′
		TELE	0°43′ × 0°33′
	1/3"	WIDE	11°55′ × 8°57′
		TELE	0°32′ × 0°24′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 3
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	1611 × 1208
		TELE	73 × 55
	2/3"	WIDE	1108 × 831
		TELE	50 × 38
	1/2"	WIDE	806 × 604
		TELE	37 × 27
	1/3"	WIDE	604 × 453
		TELE	27 × 21
Back Focal Distance (in air) (mm)			39.54
Exit Pupil Position (From Image Plane) (mm)			−64
Filter Thread (mm)			M82 × 0.75
Mount			C
Mass (kg)			2.4
Standard Accessories			Iris Control Cable Connection Connector (8-pin)
Remarks			• With Metal Mount (*1) For Iris remote function please refer to page (J-1)

Wiring



Near-infrared wavelength selected



		S0	S1
Visible light		OFF	OFF
Near-infrared light	850nm	ON	OFF
	880nm	OFF	ON
	950nm	ON	ON

Accessories

■Extender

Model	Magnification
HE15-1	1.5×
HE20-1	2×

D60×12.5BE-V41

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

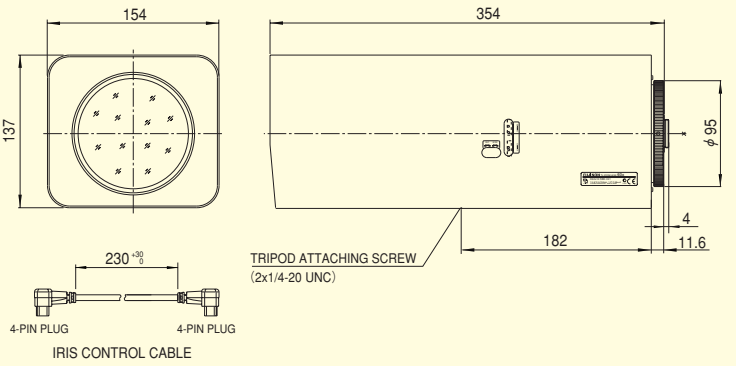
60×

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | VIDEO Video Auto Iris | IRIS-REMOTE Iris Remote | C-mt C Mount

METAL Metal Mount | PRESET Potentio Meter | N D ND Filter | 2 x Extender | F3.8 Wide Aperture Rate

*Photograph is a similar model.

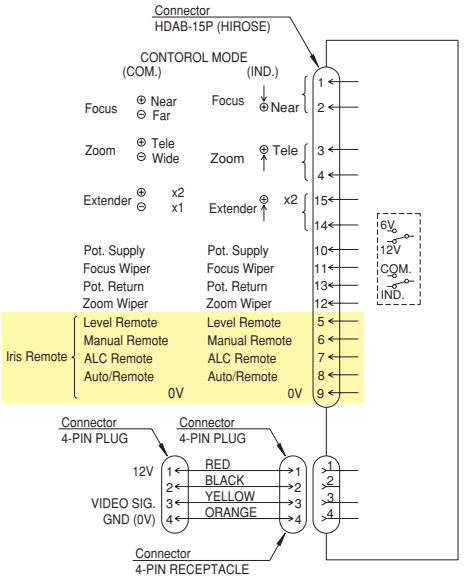
- Offering F3.8 brightness and 60x zoom (focal length of 1500mm when used with an extender), these lenses are suited for long-range surveillance, such as for seaport security.
- The compact and lightweight design allows establishment of compact remote surveillance systems.
- Equipped with a 2x extender that provides clear identification of individuals activities at a distance of 3km.
- Multi-power compatibility for connection to existing surveillance systems for zoom operation.
- Iris Override function allows manual iris adjustment.



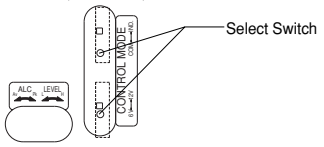
Unit : mm

			1×	2×
Focal Length (mm)			12.5~750 (60×)	25~1500 (60×)
Iris Range			F3.8~T3000 (Equivalent to F3000)	F7.6~T3000 (Equivalent to F3000)
Operation	Zoom		Motor Drive	
	Focus		Motor Drive	
	Iris		Auto (Video Type) or Remote (*1) (*2)	
Angle Of View (H×V)	1/2"	WIDE	28°43′ × 21°44′	14°35′ × 10°58′
		TELE	0°29′ × 0°22′	0°15′ × 0°11′
	1/3"	WIDE	21°44′ × 16°23′	10°58′ × 8°14′
		TELE	0°22′ × 0°17′	0°11′ × 0°08′
	1/4"	WIDE	16°23′ × 12°20′	8°14′ × 6°11′
		TELE	0°17′ × 0°08′	0°08′ × 0°06′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 5	∞ ~ 5
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	2465 × 1849	1233 × 924
		TELE	41 × 31	21 × 15
	1/3"	WIDE	1849 × 1387	925 × 693
		TELE	31 × 23	16 × 12
	1/4"	WIDE	1387 × 1040	693 × 520
		TELE	23 × 17	12 × 9
Back Focal Distance (in air) (mm)			53.23	31.10
Exit Pupil Position (From Image Plane) (mm)			−77	−38
Filter Thread (mm)			M107×1	
Mount			C	
Extender			2×	
Mass (kg)			5.1	
Standard Accessories			Iris Control Cable Connection Connector (15-pin)	
Remarks			・With Metal Mount (*1) When power is turned off, iris will automatically close. (*2) For Iris remote function please refer to page (J-1).	

Wiring



Control Mode (Side View)



Factory Setting : 12V/IND.

Controller output	Select switch position
6V	6V/IND.
±6V	6V/COM.
12V	12V/IND.
±12V	12V/COM.

TELEPHOTO ZOOM LENSES

D60×12.5R3DE-V41

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

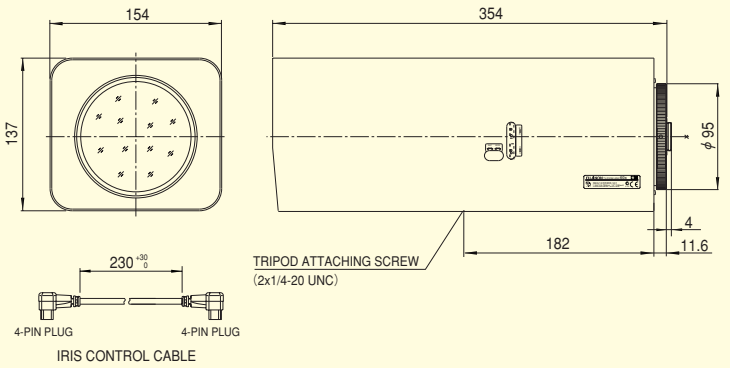
60×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | VIDEO Video Auto Iris | IRIS-REMOTE Iris Remote

C-mt C Mount | METAL Metal Mount | PRESET Potentio Meter | N D ND Filter | 2 x Extender | F3.8 Wide Aperture Rate

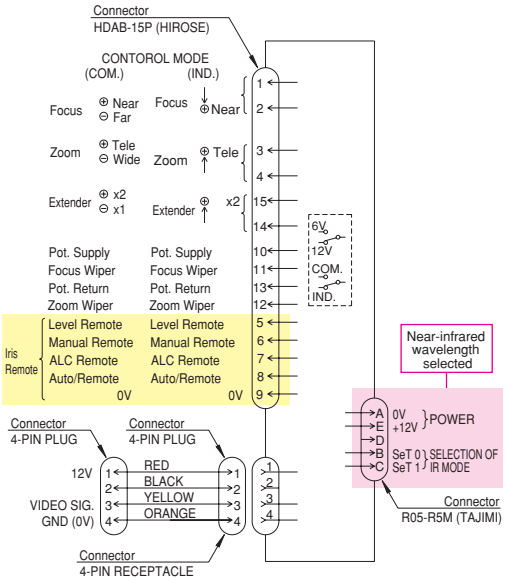
- Offering F3.8 brightness and 60x zoom (focal length of 1500mm when used with an extender), these lenses are suited for long-range surveillance, such as for seaport security.
- The compact and lightweight design allows establishment of compact remote surveillance systems.
- Day/Night capability for high-quality imaging around the clock.
- Equipped with a 2x extender that provides clear identification of individuals activities at a distance of 3km.
- Multi-power compatibility for connection to existing surveillance systems for zoom operation.
- Iris Override function allows manual iris adjustment.



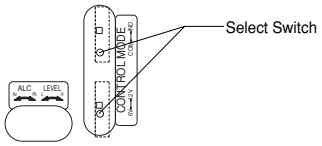
Unit : mm

			1×	2×
Focal Length (mm)			12.5~750 (60×)	25~1500 (60×)
Iris Range			F3.8~T3000 (Equivalent to F3000)	F7.6~T3000 (Equivalent to F3000)
Operation	Zoom		Motor Drive	
	Focus		Motor Drive	
	Iris		Auto (Video Type) or Remote (*1) (*2)	
Angle Of View (H×V)	1/2"	WIDE	28°43′ × 21°44′	14°35′ × 10°58′
		TELE	0°29′ × 0°22′	0°15′ × 0°11′
	1/3"	WIDE	21°44′ × 16°23′	10°58′ × 8°14′
		TELE	0°22′ × 0°17′	0°11′ × 0°08′
	1/4"	WIDE	16°23′ × 12°20′	8°14′ × 6°11′
		TELE	0°17′ × 0°08′	0°08′ × 0°06′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 5	∞ ~ 5
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	2465 × 1849	1233 × 924
		TELE	41 × 31	21 × 15
	1/3"	WIDE	1849 × 1387	925 × 693
		TELE	31 × 23	16 × 12
	1/4"	WIDE	1387 × 1040	693 × 520
		TELE	23 × 17	12 × 9
Back Focal Distance (in air) (mm)			53.23	31.10
Exit Pupil Position (From Image Plane) (mm)			−77	−38
Filter Thread (mm)			M107×1	
Mount			C	
Extender			2×	
Mass (kg)			5.2	
Standard Accessories			Iris Control Cable Connection Connector (15-pin, 5-pin)	
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. (*2) For Iris remote function please refer to page (J-1).	

Wiring



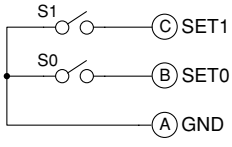
Control Mode (Side View)



Factory Setting : 12V／IND.

Controller output	Select switch position
6V	6V／IND.
±6V	6V／COM.
12V	12V／IND.
±12V	12V／COM.

Near-infrared wavelength selected



		S0	S1
Visible light		OFF	OFF
Near-infrared light	850nm	ON	OFF
	880nm	OFF	ON
	950nm	ON	ON

D60×12.5R3DE-ZP1

Applicable camera (model)

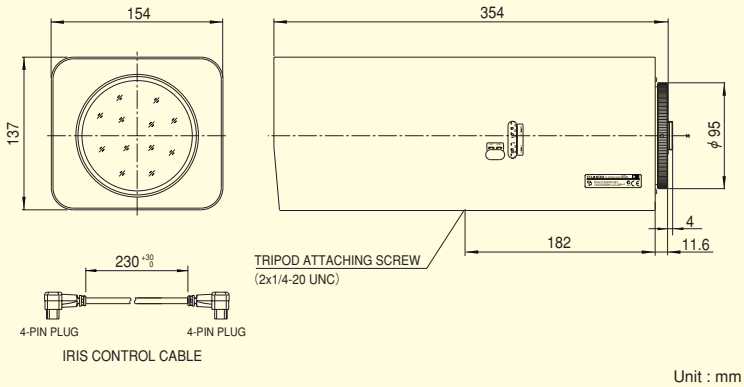
1 | 2/3 | 1/2 | 1/3 | 1/4

60×

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | VIDEO Video Auto Iris | IRIS-REMOTE Iris Remote

C-mt C Mount | METAL Metal Mount | P C PC Control | SERVO Full Servo | N D ND Filter | 2 x Extender | F3.8 Wide Aperture Rate

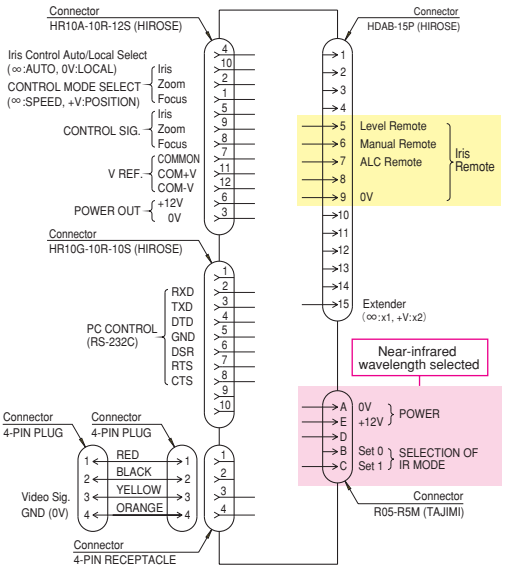
- Offering F3.8 brightness and 60x zoom (focal length of 1500mm when used with an extender), these lenses are suited for long-range surveillance, such as for seaport security.
- The compact and lightweight design allows establishment of compact remote surveillance systems.
- Day/Night capability for high-quality imaging around the clock.
- Equipped with a 2x extender that provides clear identification of individuals activities at a distance of 3km.
- Full servo control for fine zoom operation and PC-based control.
- Iris Override function allows manual iris adjustment.



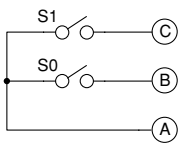
Unit : mm

			1×	2×
Focal Length (mm)			12.5~750 (60×)	25~1500 (60×)
Iris Range			F3.8~T3000 (Equivalent to F3000)	F7.6~T3000 (Equivalent to F3000)
Operation	Zoom		Servo Control	
	Focus		Servo Control	
	Iris		Auto (Video Type) , Remote or Servo Control (*1) (*2)	
Angle Of View (H×V)	1/2"	WIDE	28°43′ × 21°44′	14°35′ × 10°58′
		TELE	0°29′ × 0°22′	0°15′ × 0°11′
	1/3"	WIDE	21°44′ × 16°23′	10°58′ × 8°14′
		TELE	0°22′ × 0°17′	0°11′ × 0°08′
	1/4"	WIDE	16°23′ × 12°20′	8°14′ × 6°11′
		TELE	0°17′ × 0°08′	0°08′ × 0°06′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 5	∞ ~ 5
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	WIDE	2465 × 1849	1233 × 924
		TELE	41 × 31	21 × 15
	1/3"	WIDE	1849 × 1387	925 × 693
		TELE	31 × 23	16 × 12
	1/4"	WIDE	1387 × 1040	693 × 520
		TELE	23 × 17	12 × 9
Back Focal Distance (in air) (mm)			53.23	31.10
Exit Pupil Position (From Image Plane) (mm)			−77	−38
Filter Thread (mm)			M107×1	
Mount			C	
Extender			2×	
Mass (kg)			5.2	
Standard Accessories			Iris Control Cable Connection Connector (15-pin, 5-pin)	
Remarks			• With Metal Mount (*1) When power is turned off, iris will automatically close. (*2) For Iris remote function please refer to page (J-1).	

Wiring



Near-infrared wavelength selected



		S0	S1
Visible light		OFF	OFF
Near-infrared light	850nm	ON	OFF
	880nm	OFF	ON
	950nm	ON	ON

C55×13.5P-EP1B

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

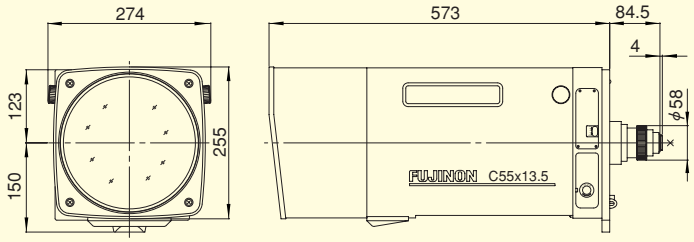
55×

*Photograph is a similar model.

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | VIDEO Video Auto Iris | C-mt C Mount | METAL Metal Mount

SERVO Full Servo | N D ND Filter | 2 x Extender | OS-TECH Stabilize Adapter | F2.1 Wide Aperture Rate

- Achieved super telephoto at the field angle of 0˚15′, best suited for long-distance monitoring such as gulf monitoring (when used on 1/2" cameras).
- In addition to the amazing brightness of F2.1, adopting the coating to reproduce the good image quality over the entire visible light range.
- Compatible with a wide range - 1", 2/3" and 1/2" - cameras.
- Built-in ND filter of T1500, supporting high sensitivity cameras.
- Can be equipped with the stabilize adapter.



Unit : mm

			1×	2×
Focal Length (mm)			13.5～750 (55×)	27～1500 (55×)
Iris Range			F2.1 ～ T1500 (Equivalent to F1500)	F4.2 ～ T3000 (Equivalent to F3000)
Operation	Zoom		Servo Control	
	Focus		Servo Control	
	Iris		Auto (Video Type) or Servo Control	
Angle Of View (H×V)	1"	WIDE	50˚44′ × 39˚09′	26˚40′ × 20˚10′
		TELE	0˚59′ × 0˚44′	0˚29′ × 0˚22′
	2/3"	WIDE	36˚06′ × 27˚28′	18˚31′ × 13˚56′
		TELE	0˚40′ × 0˚30′	0˚20′ × 0˚15′
	1/2"	WIDE	26˚40′ × 20˚10′	13˚31′ × 10˚10′
		TELE	0˚29′ × 0˚22′	0˚15′ × 0˚11′
Focusing Range (From Front Of The Lens) (m)			∞ ～ 2.4	∞ ～ 2.4
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	2075 × 1556	1038 × 778
		TELE	38 × 28	19 × 14
	2/3"	WIDE	1427 × 1070	713 × 535
		TELE	26 × 19	13 × 10
	1/2"	WIDE	1038 × 778	519 × 389
		TELE	19 × 14	9 × 7
Back Focal Distance (in air) (mm)			25.01	25.01
Exit Pupil Position (From Image Plane) (mm)			−245	−141
Mount			C	
Extender			2×	
Mass (kg)			20	
Control Unit			CRD-40 (Option)	

Remarks

・With Metal Mount

[Electrical Specification] Power Supply : DC 12V (DC 11～16V) Current Consumption : 2.1A (Max.)

	Zoom	Focus	Iris	Extender
CONTROL SIGNAL	TELE : 2.5V WIDE : 7.5V	NEAR : 2.5V FAR : 7.5V	AUTO / VIDEO (1Vp-p) / REMOTE / OPEN:7V, CLOSE:2V	1× : ∞ 2× : +V
Current Consumption	670mA (Max.)	670mA (Max.)	100mA (Max.)	200mA (Max.)
OPERATING TIME	1s. (Max.)	1s. (Max.)	1s. (Max.)	1s. (Max.)

・Also available: C55×20P-EP1B

Accessories

■Stabilize Adapter
TS-C11

C55×13.5R2Q-EP1B

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

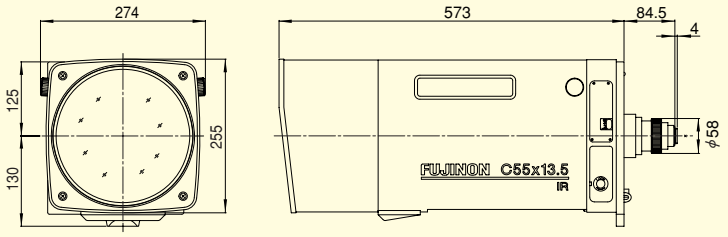
55×

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | VIDEO Video Auto Iris | C-mt C Mount

METAL Metal Mount | P C PC Control | SERVO Full Servo | N D ND Filter | 2 x Extender | OS-TECH Stabilize Adapter | F2.1 Wide Aperture Rate

*Photograph is a similar model.

- 55x telephoto zoom lens with near-infrared wavelength selection mechanism, best suited for day and night cameras.
- Achieved super telephoto at the field angle of 0°15′, best suited for long-distance monitoring such as gulf monitoring (when used on 1/2" cameras).
- In addition to the amazing brightness of F2.1, adopting the coating to reproduce the good image quality over the entire range from visible light to near-infrared light.
- Equipped with the RS-232C interface for advanced control.
- Compatible with a wide range - 1", 2/3" and 1/2" - cameras.
- Can be equipped with the stabilize adapter.



Unit : mm

			1×	2×
Focal Length (mm)			13.5~750 (55×)	27~1500 (55×)
Iris Range			F2.1 ~ T1500 (Equivalent to F1500)	F4.2 ~ T3000 (Equivalent to F3000)
Operation	Zoom		Servo Control	
	Focus		Servo Control	
	Iris		Auto (Video Type) or Servo Control	
Angle Of View (H×V)	1"	WIDE	50°44′ × 39°09′	26°40′ × 20°10′
		TELE	0°59′ × 0°44′	0°29′ × 0°22′
	2/3"	WIDE	36°06′ × 27°28′	18°31′ × 13°56′
		TELE	0°40′ × 0°30′	0°20′ × 0°15′
	1/2"	WIDE	26°40′ × 20°10′	13°31′ × 10°10′
		TELE	0°29′ × 0°22′	0°15′ × 0°11′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 2.4	∞ ~ 2.4
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	2075 × 1556	1038 × 778
		TELE	38 × 28	19 × 14
	2/3"	WIDE	1427 × 1070	713 × 535
		TELE	26 × 19	13 × 10
	1/2"	WIDE	1038 × 778	519 × 389
		TELE	19 × 14	9 × 7
Back Focal Distance (in air) (mm)			25.01	25.01
Exit Pupil Position (From Image Plane) (mm)			−245	−141
Mount			C	
Extender			2×	
Mass (kg)			20	
Control Unit			CRD-40 (Option)	

Remarks

・With Metal Mount

[Electrical Specification] Power Supply : DC 12V (DC 11~16V) Current Consumption : 2.1A (Max.)

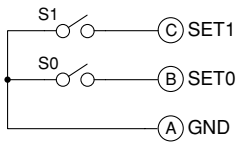
	Zoom	Focus	Iris	Extender
CONTROL SIGNAL	TELE : 2.5V WIDE : 7.5V	NEAR : 2.5V FAR : 7.5V	AUTO / VIDEO (1Vp-p) / REMOTE / OPEN:7V, CLOSE:2V	1× : ∞ 2× : +V
Current Consumption	670mA (Max.)	670mA (Max.)	100mA (Max.)	200mA (Max.)
OPERATING TIME	1s. (Max.)	1s. (Max.)	1s. (Max.)	1s. (Max.)

・Also available:
C55×20R2Q-EP1B

Accessories

■Stabilize Adapter
TS-C11

Near-infrared wavelength selected



		S0	S1
Visible light		OFF	OFF
Near-infrared light	850nm	ON	OFF
	880nm	OFF	ON
	950nm	ON	ON

TELEPHOTO ZOOM LENSES

C55×13.5R3S-ESF

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

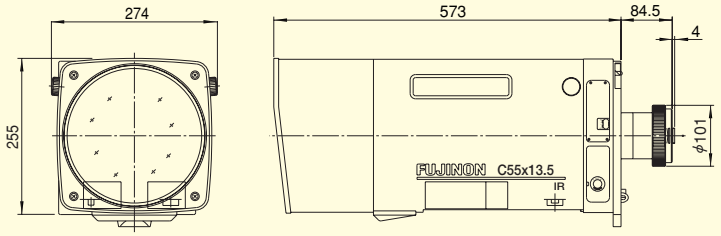
55×

ZOOM Zoom | WIDE Wide Angle | TELE Telephoto Long Focal | MOTOR DRIVE Motor Drive | Day~Night Day & Night | VIDEO Video Auto Iris | C-mt C Mount

METAL Metal Mount | SERVO Full Servo | N D ND Filter | 2 x Extender | F2.1 Wide Aperture Rate

*Photograph is a similar model.

- 55x telephoto zoom lens with near-infrared wavelength selection mechanism. With the excellent brightness of F2.1, best suited for day and night cameras.
- Equipped with the visible/IR cut filter switch mechanizm.
- Achieved telephoto at the field angle of 0°15′, best suited for long-distance monitoring such as disaster prevention (when used on 1/2" cameras).
- Compatible with a wide range - 1", 2/3" and 1/2" - cameras.



Unit : mm

			1×	2×
Focal Length (mm)			13.5~750 (55×)	27~1500 (55×)
Iris Range			F2.1 ~ T1500 (Equivalent to F1500)	F4.2 ~ T3000 (Equivalent to F3000)
Operation	Zoom		Servo Control	
	Focus		Servo Control	
	Iris		Auto (Video Type) or Servo Control	
Angle Of View (H×V)	1"	WIDE	50°44′ × 39°09′	26°40′ × 20°10′
		TELE	0°59′ × 0°44′	0°29′ × 0°22′
	2/3"	WIDE	36°06′ × 27°28′	18°31′ × 13°56′
		TELE	0°40′ × 0°30′	0°20′ × 0°15′
	1/2"	WIDE	26°40′ × 20°10′	13°31′ × 10°10′
		TELE	0°29′ × 0°22′	0°15′ × 0°11′
Focusing Range (From Front Of The Lens) (m)			∞ ~ 2.4	∞ ~ 2.4
Object Dimensions at M.O.D. (H×V) (mm)	1"	WIDE	2075 × 1556	1038 × 778
		TELE	38 × 28	19 × 14
	2/3"	WIDE	1427 × 1070	713 × 535
		TELE	26 × 19	13 × 10
	1/2"	WIDE	1038 × 778	519 × 389
		TELE	19 × 14	9 × 7
Back Focal Distance (in air) (mm)			25.01	25.01
Exit Pupil Position (From Image Plane) (mm)			−245	−141
Mount			C	
Extender			2×	
Mass (kg)			21	
Control Unit			CRD-40 (Option)	

Remarks

・With Metal Mount

[Electrical Specification] Power Supply : DC 12V (DC 11~16V) Current Consumption : 2.1A (Max.)

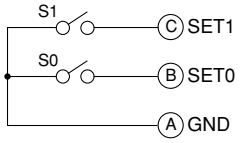
	Zoom	Focus	Iris	Extender
CONTROL SIGNAL	TELE : 2.5V WIDE : 7.5V	NEAR : 2.5V FAR : 7.5V	AUTO / VIDEO (1Vp-p) / REMOTE / OPEN:7V, CLOSE:2V	1× : ∞ 2× : +V
Current Consumption	670mA (Max.)	670mA (Max.)	100mA (Max.)	200mA (Max.)
OPERATING TIME	1s. (Max.)	1s. (Max.)	1s. (Max.)	1s. (Max.)

・Also available:
C55×20R3S-ESF

Accessories

■Stabilize Adapter
TS-C11

Near-infrared wavelength selected

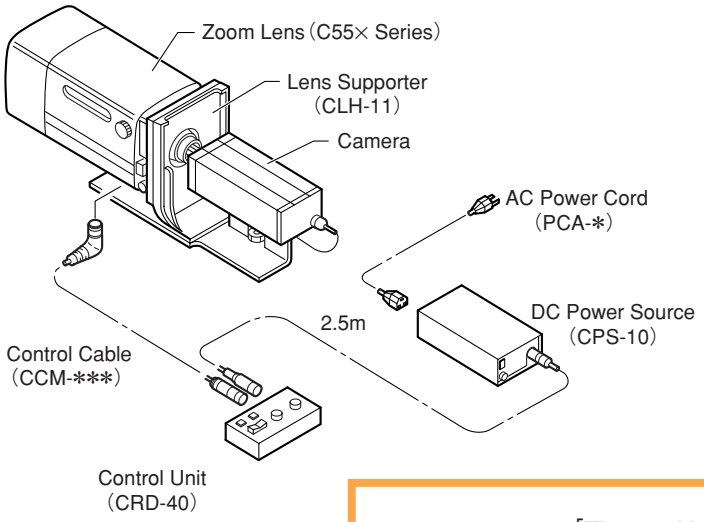


		S0	S1
Visible light		OFF	OFF
Near-infrared light	850nm	ON	OFF
	880nm	OFF	ON
	950nm	ON	ON

SYSTEM CHART

SYSTEM-1

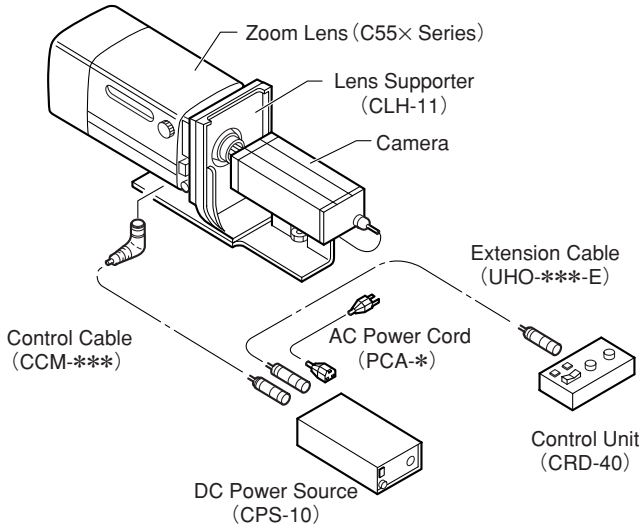
[The total length of extension cables at maximum is 50m]



C55x Series

SYSTEM-2

[The total length of extension cables at maximum is 200m]



Specifications

■Control Unit

CRD-40	Zoom	: Speed Control
	Focus	: Position Control
	Iris	: Auto or Position Control
	Extender	: ON/OFF Control
	Current Consumption (DC 15V)	: 3W (CRD-40 ONLY) 50W (Including Lens)

■DC Power Source

CPS-10	Input	: AC 90V~250V, 50/60Hz
	Output	: DC 15V, 3.5A

■Lens Supporter

CLH-11

■Control Cable

CCM-010	10m
CCM-020	20m
CCM-050	50m

■Extension Cable

UHO-010-E	10m
UHO-020-E	20m
UHO-050-E	50m
UHO-100-E	100m
UHO-150-E	150m

■AC Power Cord

Japan	PCA-1
U.S.A./Canada	PCA-2
Continental Europe	PCA-3
Australia	PCA-4
Without AC Plug	PCA-5

Applicable camera (model)

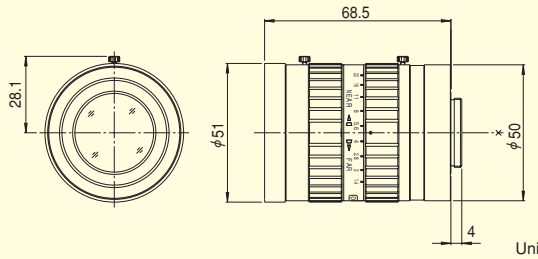
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

HF12.5SA-1

FIXED Fixed Focal | 5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 5 megapixel camera resolution.
- Rear focusing system provides improved performance in macro photography.
- Wide-aperture (F1.4) design achieves clear images under low light intensity.
- Enhanced image recognition accuracy achieved by reduction of distortion and improvement of illumination uniformity.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		12.5
Iris Range		F1.4 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	38°47′ × 29°35′
	1/2"	28°43′ × 21°44′
	1/3"	21°44′ × 16°23′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	83 × 62
	1/2"	60 × 45
	1/3"	45 × 34
Back Focal Distance (in air) (mm)		16.07
Exit Pupil Position (From Image Plane) (mm)		−101
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		295

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

Applicable camera (model)

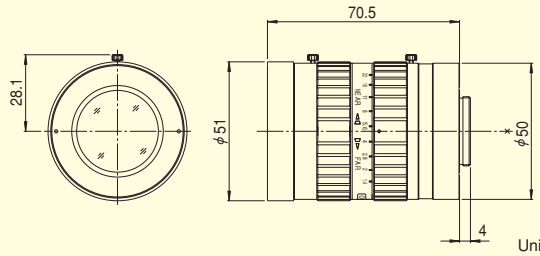
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

HF16SA-1

FIXED Fixed Focal | 5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 5 megapixel camera resolution.
- Rear focusing system provides improved performance in macro photography.
- Wide-aperture (F1.4) design achieves clear images under low light intensity.
- Enhanced image recognition accuracy achieved by reduction of distortion and improvement of illumination uniformity.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		16
Iris Range		F1.4 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	30°45′ × 23°18′
	1/2"	22°37′ × 17°04′
	1/3"	17°04′ × 12°50′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	69 × 51
	1/2"	50 × 37
	1/3"	37 × 28
Back Focal Distance (in air) (mm)		17.99
Exit Pupil Position (From Image Plane) (mm)		−172
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		285

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

For FA/Machine Vision
Fixed Focal

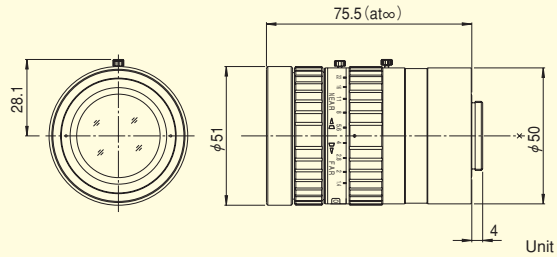
HF25SA-1

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | 5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 5 megapixel camera resolution.
- Wide-aperture (F1.4) design achieves clear images under low light intensity.
- Enhanced image recognition accuracy achieved by reduction of distortion and improvement of illumination uniformity.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		25
Iris Range		F1.4 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	19°58′ × 15°02′
	1/2"	14°35′ × 10°58′
	1/3"	10°58′ × 8°14′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	44 × 33
	1/2"	32 × 24
	1/3"	24 × 18
Back Focal Distance (in air) (mm)		22.32
Exit Pupil Position (From Image Plane) (mm)		−140
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		315

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

For FA/Machine Vision
Fixed Focal

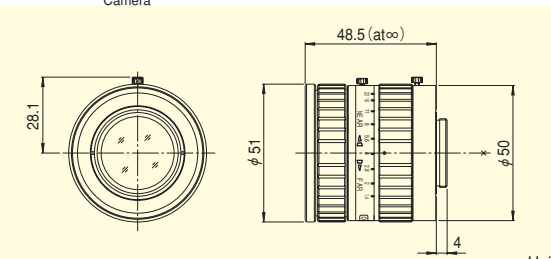
HF35SA-1

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | 5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 5 megapixel camera resolution.
- Wide-aperture (F1.4) design achieves clear images under low light intensity.
- Enhanced image recognition accuracy achieved by reduction of distortion and improvement of illumination uniformity.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		35
Iris Range		F1.4 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	14°20′ × 10°46′
	1/2"	10°27′ × 7°51′
	1/3"	7°51′ × 5°53′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.2
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	50 × 38
	1/2"	37 × 27
	1/3"	27 × 21
Back Focal Distance (in air) (mm)		14.99
Exit Pupil Position (From Image Plane) (mm)		−37
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		185

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

Applicable camera (model)

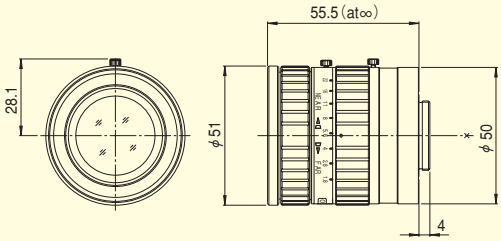
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

HF50SA-1

FIXED Fixed Focal | 5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

- High-resolution design, providing support for up to 5 megapixel camera resolution.
- Wide-aperture (F1.8) design achieves clear images under low light intensity, despite the long focal distance.
- Enhanced image recognition accuracy achieved by reduction of distortion and improvement of illumination uniformity.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		50
Iris Range		F1.8 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	10°03′ × 7°33′
	1/2"	7°19′ × 5°30′
	1/3"	5°30′ × 4°07′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.4 *1
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	70 × 52
	1/2"	51 × 38
	1/3"	38 × 28
Back Focal Distance (in air) (mm)		17.81
Exit Pupil Position (From Image Plane) (mm)		−49
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		240

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

*1 Using an extension tube longer than 5mm the M.O.D. will increase to 0.3m.

Applicable camera (model)

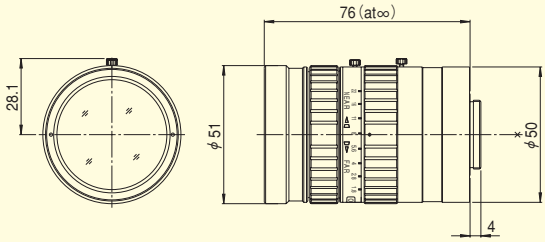
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

HF75SA-1

FIXED Fixed Focal | 5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

- High-resolution design, providing support for up to 5 megapixel camera resolution.
- Wide-aperture (F1.8) design achieves clear images under low light intensity, despite the long focal distance.
- Enhanced image recognition accuracy achieved by reduction of distortion and improvement of illumination uniformity.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		75
Iris Range		F1.8 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	6°43′ × 5°02′
	1/2"	4°53′ × 3°40′
	1/3"	3°40′ × 2°45′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.9 *2
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	101 × 76
	1/2"	74 × 55
	1/3"	55 × 41
Back Focal Distance (in air) (mm)		24.43
Exit Pupil Position (From Image Plane) (mm)		−52
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		305

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

*2 Using an extension tube longer than 5mm the M.O.D. will increase to 0.5m.

For FA/Machine Vision
Fixed Focal

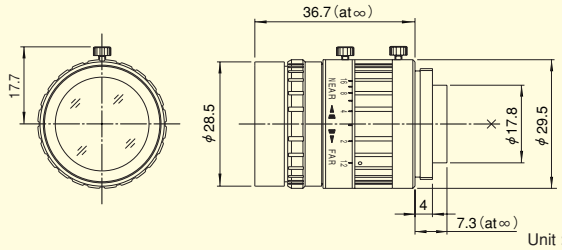
DF6HA-1B

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | WIDE Wide Angle | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.2 Wide Aperture Rate

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Focus & iris lock tab provided, supporting environments such as vibration.



Unit : mm

Focal Length (mm)		6
Iris Range		F1.2 ~ F16
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1/2"	56°09′ × 43°36′
	1/3"	43°36′ × 33°24′
	1/4"	33°24′ × 25°22′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	122 × 92
	1/3"	92 × 69
	1/4"	69 × 52
Back Focal Distance (in air) (mm)		11.44
Exit Pupil Position (From Image Plane) (mm)		−46
Filter Thread (mm)		M27 × 0.5
Mount		C
Mass (g)		55

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

For FA/Machine Vision
Fixed Focal

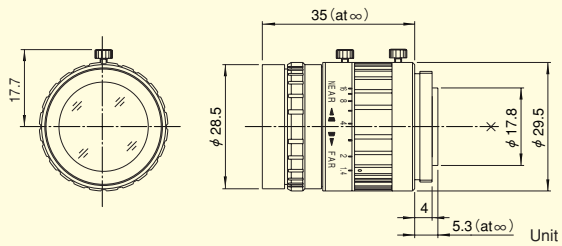
HF9HA-1B

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | WIDE Wide Angle | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Focus & iris lock tab provided, supporting environments such as vibration.



Unit : mm

Focal Length (mm)		9
Iris Range		F1.4 ~ F16
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	52°06′ × 40°16′
	1/2"	39°09′ × 29°52′
	1/3"	29°52′ × 22°37′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	108 × 81
	1/2"	79 × 59
	1/3"	59 × 44
Back Focal Distance (in air) (mm)		13.48
Exit Pupil Position (From Image Plane) (mm)		−28
Filter Thread (mm)		M27 × 0.5
Mount		C
Mass (g)		55

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

Applicable camera (model)

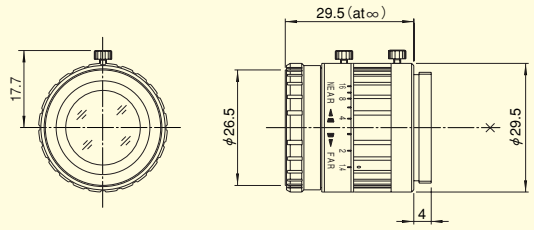
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

HF12.5HA-1B

FIXED Fixed Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Focus & iris lock tab provided, supporting environments such as vibration.



Unit : mm

Focal Length (mm)		12.5
Iris Range		F1.4 ~ F16
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	38°47′ × 29°35′
	1/2"	28°43′ × 21°44′
	1/3"	21°44′ × 16°23′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	78 × 58
	1/2"	57 × 42
	1/3"	42 × 32
Back Focal Distance (in air) (mm)		15.09
Exit Pupil Position (From Image Plane) (mm)		−31
Filter Thread (mm)		M25.5 × 0.5
Mount		C
Mass (g)		45

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

Applicable camera (model)

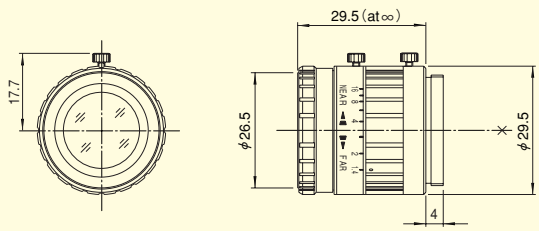
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

HF16HA-1B

FIXED Fixed Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Focus & iris lock tab provided, supporting environments such as vibration.



Unit : mm

Focal Length (mm)		16
Iris Range		F1.4 ~ F16
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	30°45′ × 23°18′
	1/2"	22°37′ × 17°04′
	1/3"	17°04′ × 12°50′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	63 × 47
	1/2"	46 × 34
	1/3"	34 × 26
Back Focal Distance (in air) (mm)		15.15
Exit Pupil Position (From Image Plane) (mm)		−31
Filter Thread (mm)		M25.5 × 0.5
Mount		C
Mass (g)		45

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

For FA/Machine Vision
Fixed Focal

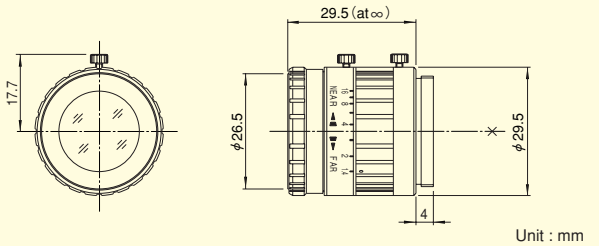
HF25HA-1B

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | TELE Telephoto Long Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Focus & iris lock tab provided, supporting environments such as vibration.



Unit : mm

Focal Length (mm)		25
Iris Range		F1.4 ~ F16
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	19°58′ × 15°02′
	1/2"	14°35′ × 10°58′
	1/3"	10°58′ × 8°14′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.15
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	53 × 40
	1/2"	38 × 29
	1/3"	29 × 22
Back Focal Distance (in air) (mm)		14.58
Exit Pupil Position (From Image Plane) (mm)		−32
Filter Thread (mm)		M25.5 × 0.5
Mount		C
Mass (g)		45

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

For FA/Machine Vision
Fixed Focal

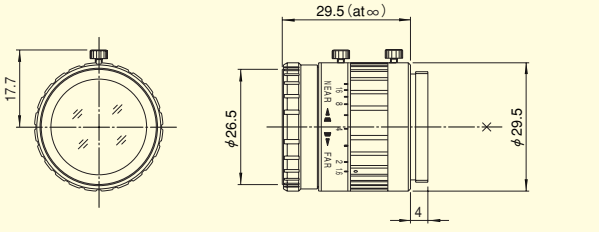
HF35HA-1B

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | TELE Telephoto Long Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.6 Wide Aperture Rate

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Focus & iris lock tab provided, supporting environments such as vibration.



Unit : mm

Focal Length (mm)		35
Iris Range		F1.6 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	14°20′ × 10°46′
	1/2"	10°27′ × 7°51′
	1/3"	7°51′ × 5°53′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.25
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	59 × 44
	1/2"	43 × 32
	1/3"	32 × 24
Back Focal Distance (in air) (mm)		15.03
Exit Pupil Position (From Image Plane) (mm)		−27
Filter Thread (mm)		M25.5 × 0.5
Mount		C
Mass (g)		45

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

Applicable camera (model)

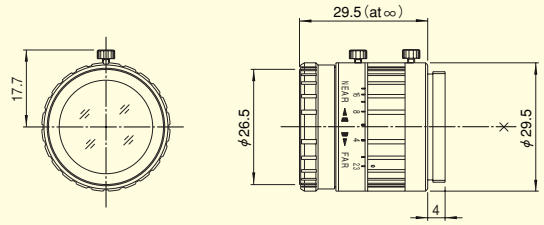
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

HF50HA-1B

FIXED Fixed Focal | TELE Telephoto Long Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Focus & iris lock tab provided, supporting environments such as vibration.



Unit : mm

Focal Length (mm)		50
Iris Range		F2.3 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	10°03′ × 7°33′
	1/2"	7°19′ × 5°30′
	1/3"	5°30′ × 4°07′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.5
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	77 × 57
	1/2"	56 × 42
	1/3"	42 × 31
Back Focal Distance (in air) (mm)		15.26
Exit Pupil Position (From Image Plane) (mm)		−25
Filter Thread (mm)		M25.5 × 0.5
Mount		C
Mass (g)		45

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

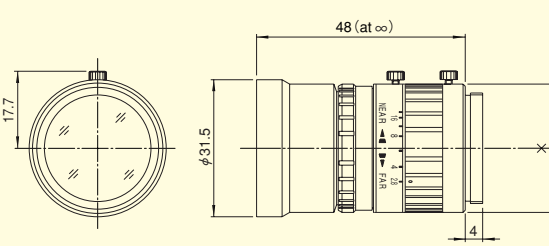
For FA/Machine Vision
Fixed Focal

HF75HA-1B

FIXED Fixed Focal | TELE Telephoto Long Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

*Photograph is a similar model.

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Focus & iris lock tab provided, supporting environments such as vibration.



Unit : mm

Focal Length (mm)		75
Iris Range		F2.8 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	2/3"	6°43′ × 5°02′
	1/2"	4°53′ × 3°40′
	1/3"	3°40′ × 2°45′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 1.1
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	114 × 85
	1/2"	83 × 62
	1/3"	62 × 47
Back Focal Distance (in air) (mm)		15.74
Exit Pupil Position (From Image Plane) (mm)		−27
Filter Thread (mm)		M30.5 × 0.5
Mount		C
Mass (g)		55

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

For FA/Machine Vision
Fixed Focal

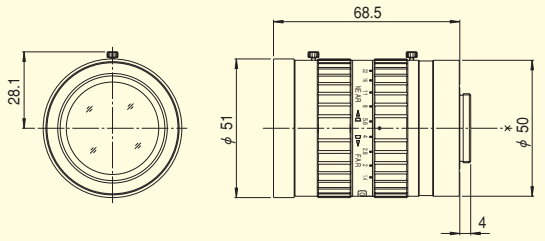
CF12.5HA-1

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Rear focusing system provides improved performance in macro photography.
- Wide-aperture (F1.4) design achieves clear images under low light intensity.
- Low-distortion design achieving accurate image input.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		12.5
Iris Range		F1.4 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1"	54°13′ × 42°01′
	2/3"	38°47′ × 29°35′
	1/2"	28°43′ × 21°44′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1"	120 × 90
	2/3"	83 × 62
	1/2"	60 × 45
Back Focal Distance (in air) (mm)		16.07
Exit Pupil Position (From Image Plane) (mm)		−101
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		290

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

For FA/Machine Vision
Fixed Focal

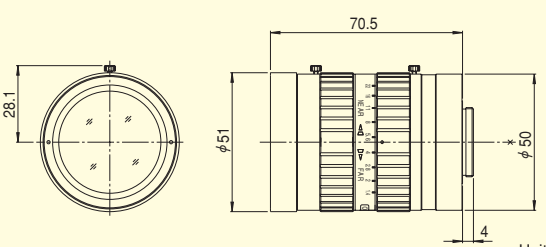
CF16HA-1

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Rear focusing system provides improved performance in macro photography.
- Wide-aperture (F1.4) design achieves clear images under low light intensity.
- Low-distortion design achieving accurate image input.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		16
Iris Range		F1.4 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1"	43°36′ × 33°24′
	2/3"	30°45′ × 23°18′
	1/2"	22°37′ × 17°04′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1"	100 × 75
	2/3"	69 × 51
	1/2"	50 × 37
Back Focal Distance (in air) (mm)		17.99
Exit Pupil Position (From Image Plane) (mm)		−172
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		280

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

Applicable camera (model)

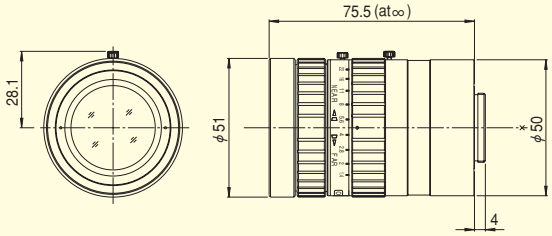
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

CF25HA-1

FIXED Fixed Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Wide-aperture (F1.4) design achieves clear images under low light intensity.
- Low-distortion design achieving accurate image input.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		25
Iris Range		F1.4 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1"	28°43′ × 21°44′
	2/3"	19°58′ × 15°02′
	1/2"	14°35′ × 10°58′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1"	65 × 48
	2/3"	44 × 33
	1/2"	32 × 24
Back Focal Distance (in air) (mm)		22.32
Exit Pupil Position (From Image Plane) (mm)		−140
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		310

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

Applicable camera (model)

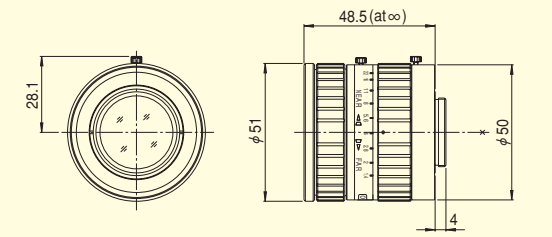
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

CF35HA-1

FIXED Fixed Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount | F1.4 Wide Aperture Rate

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Wide-aperture (F1.4) design achieves clear images under low light intensity.
- Low-distortion design achieving accurate image input.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		35
Iris Range		F1.4 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1"	20°43′ × 15°37′
	2/3"	14°20′ × 10°46′
	1/2"	10°27′ × 7°51′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.2
Object Dimensions at M.O.D. (H×V) (mm)	1"	73 × 55
	2/3"	50 × 38
	1/2"	37 × 27
Back Focal Distance (in air) (mm)		14.99
Exit Pupil Position (From Image Plane) (mm)		−37
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		180

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

Applicable camera (model)

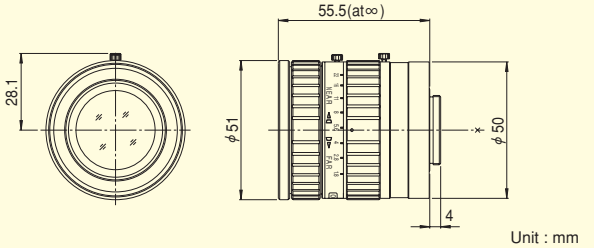
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

CF50HA-1

FIXED Fixed Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Wide-aperture (F1.8) design achieves clear images under low light intensity, despite the long focal distance.
- Low-distortion design achieving accurate image input.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		50
Iris Range		F1.8 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1"	14°35′ × 10°58′
	2/3"	10°03′ × 7°33′
	1/2"	7°19′ × 5°30′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.4 *1
Object Dimensions at M.O.D. (H×V) (mm)	1"	101 × 76
	2/3"	70 × 52
	1/2"	51 × 38
Back Focal Distance (in air) (mm)		17.81
Exit Pupil Position (From Image Plane) (mm)		−49
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		235

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

*1 Using an extension tube longer than 5mm the M.O.D. will increase to 0.3m.

Applicable camera (model)

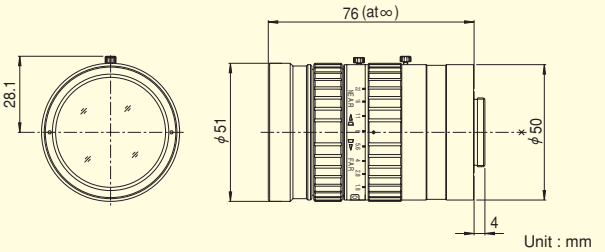
1 | 2/3 | 1/2 | 1/3 | 1/4

For FA/Machine Vision
Fixed Focal

CF75HA-1

FIXED Fixed Focal | 1.5 Mega For Megapixel Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Wide-aperture (F1.8) design achieves clear images under low light intensity, despite the long focal distance.
- Low-distortion design achieving accurate image input.
- Robust enclosure resistant to vibrations and shocks. Equipped with locking knobs for the iris and the focus.



Unit : mm

Focal Length (mm)		75
Iris Range		F1.8 ~ F22
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1"	9°45′ × 7°19′
	2/3"	6°43′ × 5°02′
	1/2"	4°53′ × 3°40′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.9 *2
Object Dimensions at M.O.D. (H×V) (mm)	1"	147 × 111
	2/3"	101 × 76
	1/2"	74 × 55
Back Focal Distance (in air) (mm)		24.43
Exit Pupil Position (From Image Plane) (mm)		−52
Filter Thread (mm)		M49 × 0.75
Mount		C
Mass (g)		300

Remarks
- With Metal Mount
- With Locking Knob for Iris and Focus

*2 Using an extension tube longer than 5mm the M.O.D. will increase to 0.5m.

For FA/Machine Vision
3CCD Camera

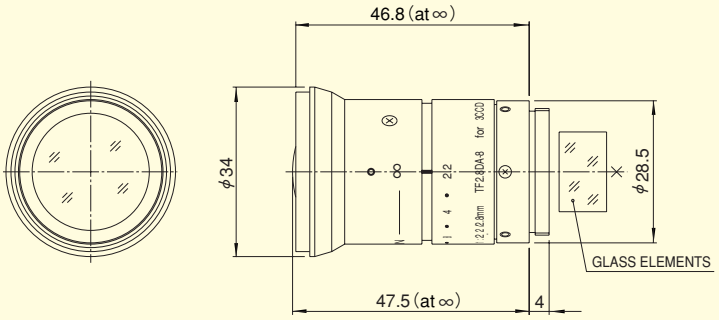
TF2.8DA-8

Applicable camera (model)

1	2/3	1/2	1/3	1/4
			●	

FIXED Fixed Focal | WIDE Wide Angle | 3CCD For 3CCD Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

- Special design for optimizing the image quality of 3CCD cameras.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Faithful color reproduction for 3CCD cameras, best suited for advanced monitoring applications.



Unit : mm

Focal Length (mm)		2.8
Iris Range		F2.2 ~ F16 · Close
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1/3"	89°08′ × 69°20′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	218 × 153
Back Focal Distance (in air) (mm)		14.49
Exit Pupil Position (From Image Plane) (mm)		98
Filter Thread (mm)		—
Mount		C
Mass (g)		75
Remarks	·With Metal Mount	

For FA/Machine Vision
3CCD Camera

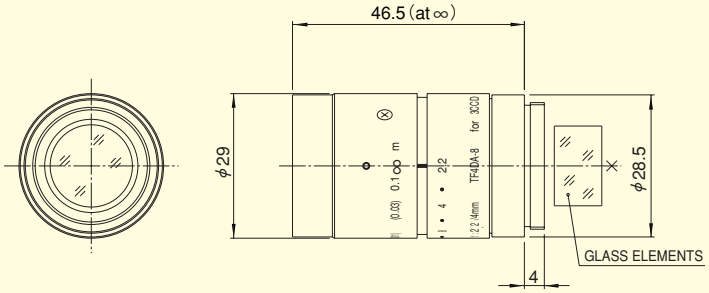
TF4DA-8

Applicable camera (model)

1	2/3	1/2	1/3	1/4
			●	

FIXED Fixed Focal | 3CCD For 3CCD Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

- Special design for optimizing the image quality of 3CCD cameras.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Faithful color reproduction for 3CCD cameras, best suited for advanced monitoring applications.



Unit : mm

Focal Length (mm)		4
Iris Range		F2.2 ~ F16 · Close
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1/3"	61°56′ × 48°27′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	131 × 98
Back Focal Distance (in air) (mm)		14.61
Exit Pupil Position (From Image Plane) (mm)		88
Filter Thread (mm)		M27 × 0.5
Mount		C
Mass (g)		70
Remarks	·With Metal Mount	

For FA/Machine Vision
3CCD Camera

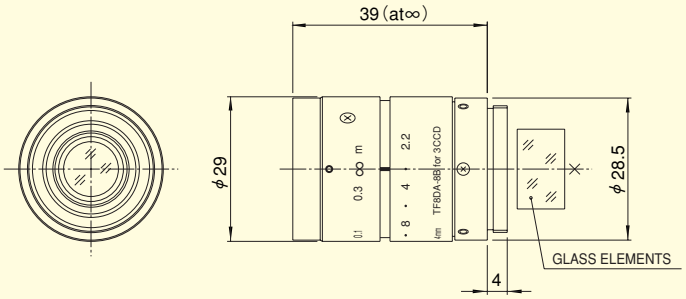
TF8DA-8B

Applicable camera (model)

1	2/3	1/2	1/3	1/4
			●	

FIXED Fixed Focal | 3CCD For 3CCD Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

- Special design for optimizing the image quality of 3CCD cameras.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Faithful color reproduction for 3CCD cameras, best suited for advanced monitoring applications.
- Robust enclosure that can withstanding vibrations and shocks. Equipped with locking screws for the iris and the focus.



Unit : mm

Focal Length (mm)		8
Iris Range		F2.2 ~ F16 · Close
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1/3"	33°24′ × 25°22′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	66 × 50
Back Focal Distance (in air) (mm)		14.83
Exit Pupil Position (From Image Plane) (mm)		−176
Filter Thread (mm)		M25.5 × 0.5
Mount		C
Mass (g)		60
Remarks		·With Metal Mount ·With Locking Screw for Iris and Focus

For FA/Machine Vision
3CCD Camera

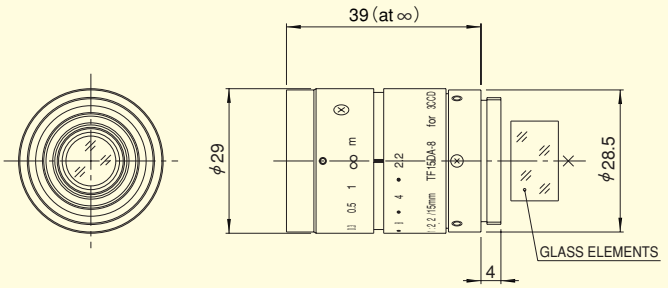
TF15DA-8

Applicable camera (model)

1 | 2/3 | 1/2 | 1/3 | 1/4

FIXED Fixed Focal | TELE Telephoto Long Focal | 3CCD For 3CCD Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

- Special design for optimizing the image quality of 3CCD cameras.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Faithful color reproduction for 3CCD cameras, best suited for advanced monitoring applications.



Unit : mm

Focal Length (mm)		15
Iris Range		F2.2 ~ F16 · Close
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1/3"	18°11′ × 13°41′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.1
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	36 × 27
Back Focal Distance (in air) (mm)		16.32
Exit Pupil Position (From Image Plane) (mm)		−89
Filter Thread (mm)		M25.5 × 0.5
Mount		C
Mass (g)		60
Remarks	·With Metal Mount	

For FA/Machine Vision
3CCD Camera

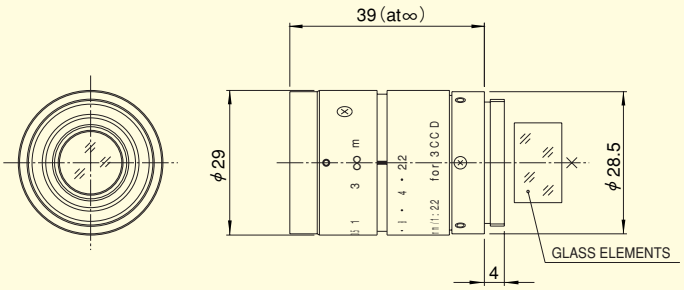
TF25DA-8B

Applicable camera (model)

1	2/3	1/2	1/3	1/4
			●	

FIXED Fixed Focal | 3CCD For 3CCD Camera | MANUAL Manual Iris | C-mt C Mount | METAL Metal Mount

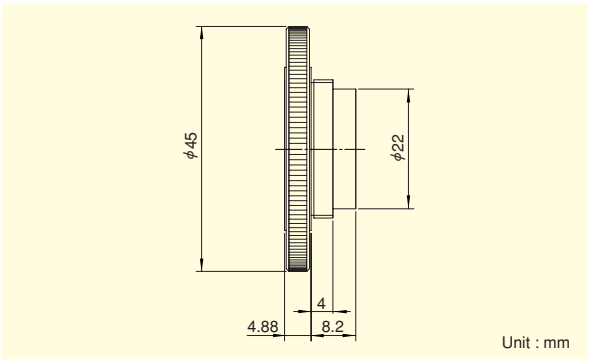
- Special design for optimizing the image quality of 3CCD cameras.
- Low-distortion design achieving accurate image input.
- Compact, lightweight and robust design, supporting various systems.
- Faithful color reproduction for 3CCD cameras, best suited for advanced monitoring applications.
- Robust enclosure that can withstanding vibrations and shocks. Equipped with locking screws for the iris and the focus.



Unit : mm

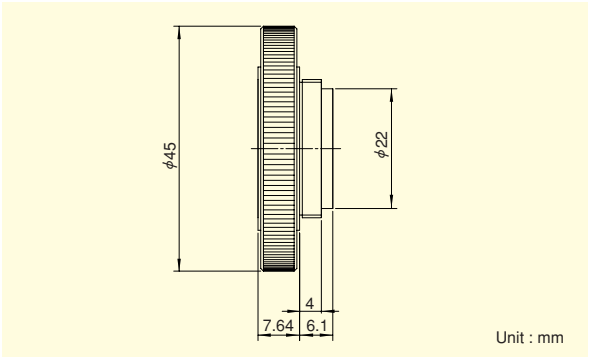
Focal Length (mm)		25
Iris Range		F2.2 ~ F16 · Close
Operation	Focus	Manual
	Iris	Manual
Angle Of View (H×V)	1/3"	10°58′ × 8°14′
Focusing Range (From Front Of The Lens) (m)		∞ ~ 0.2
Object Dimensions at M.O.D. (H×V) (mm)	1/3"	42 ×32
Back Focal Distance (in air) (mm)		15.12
Exit Pupil Position (From Image Plane) (mm)		−120
Filter Thread (mm)		M25.5 × 0.5
Mount		C
Mass (g)		60
Remarks		·With Metal Mount ·With Locking Screw for Iris and Focus

Accessories Extender HE15-1



Magnification	1.5×
Mount	C
F No. change	Original × 1.5
Focal Length Change	Original × 1.5
M.O.D. Change	Same as Original
Angle Of View	Original × 1/1.5
Object Dimension at M.O.D.	Original × 1/1.5
Remarks	・Exclusive for C Mount. ・Can not be used on CS Mount, 3 CCD Camera and non browning lenses. ・Can not be stacked and used.

Accessories Extender HE20-1



Magnification	2×
Mount	C
F No. change	Original × 2
Focal Length Change	Original × 2
M.O.D. Change	Same as Original
Angle Of View	Original × 1/2
Object Dimension at M.O.D.	Original × 1/2
Remarks	・Exclusive for C Mount. ・Can not be used on CS Mount, 3 CCD Camera and non browning lenses. ・Can not be stacked and used.

Accessories

Close-up Lens CL3355 CL10055

			CL3355 (M55×0.75mm, fc=333mm)			CL10055 (M55×0.75mm, fc=1000mm)		
Applicable Lens			Y12×6 Type	D8×7.8 Type	D12×8 Type	Y12×6 Type	D8×7.8 Type	D12×8 Type
Imaging Area (mm)			333 ~ 265	333 ~ 261	333 ~ 250	1000 ~ 565	1000 ~ 545	1000 ~ 500
Object Dimensions (mm)	1/2"	WIDE	—	205 × 153	204 × 153	—	428 × 321	436 × 327
		TELE	—	25 × 19	17 × 13	—	53 × 40	36 × 27
	1/3"	WIDE	204 × 153	153 × 115	153 × 115	436 × 327	321 × 241	327 × 245
		TELE	17 × 13	19 × 14	13 × 10	36 × 27	40 × 30	27 × 20
	1/4"	WIDE	153 × 115	115 × 86	115 × 86	327 × 245	241 × 181	245 × 184
		TELE	13 × 10	14 × 11	10 × 7	27 × 20	30 × 22	20 × 15

fc : Focal Length of Close-up Lens

ACCESSORIES

Accessories

Stabilize Adapter TS-C11

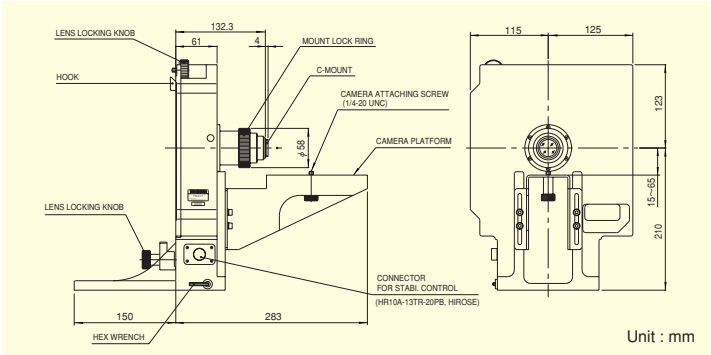
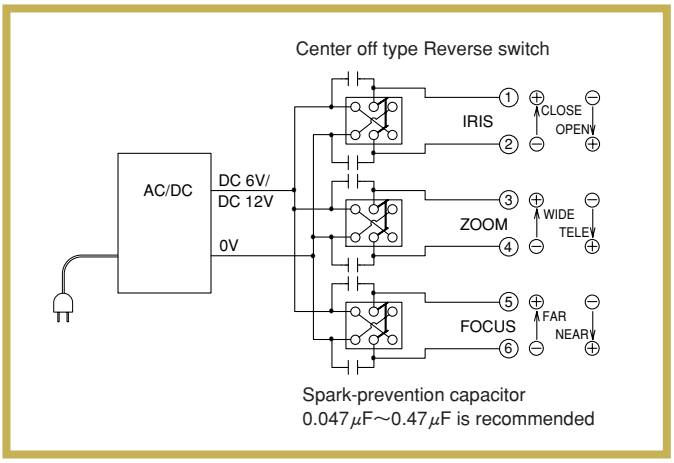
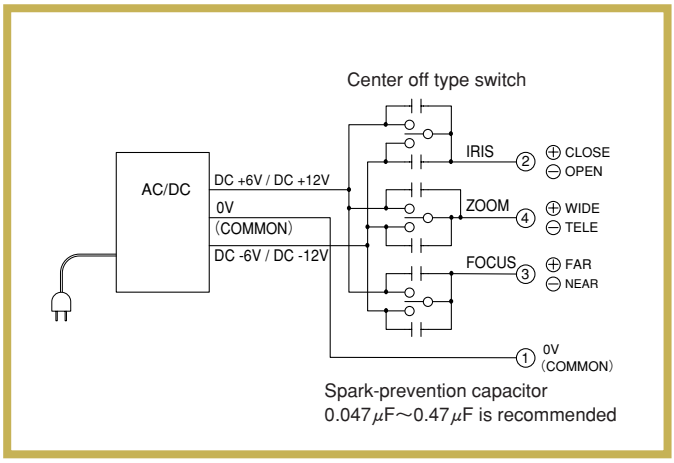


Image Shaking Compensation System	Optical shift system
Focal Length Change	1.25×
Lens to fix	C55×13.5, C55×20
Mount	C
Power Source	DC 12V
Mass (kg)	6
Remarks	

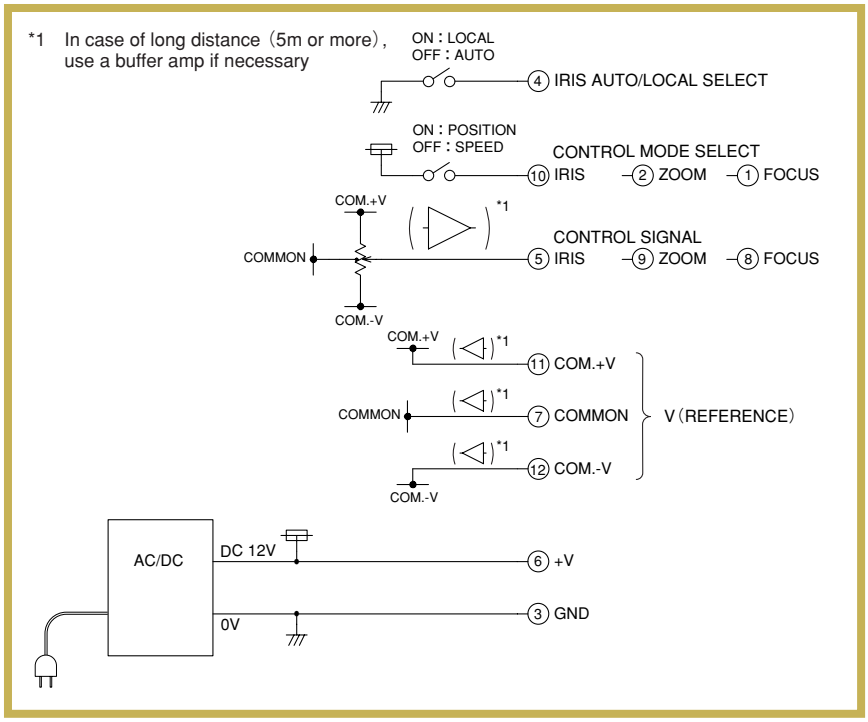
Operation system M type zoom lens [Independent mode]



Operation system M type zoom lens [Common mode]



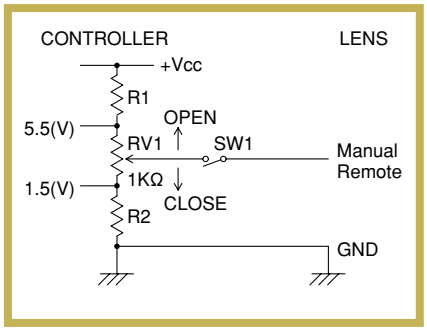
Operation system - R type zoom lens



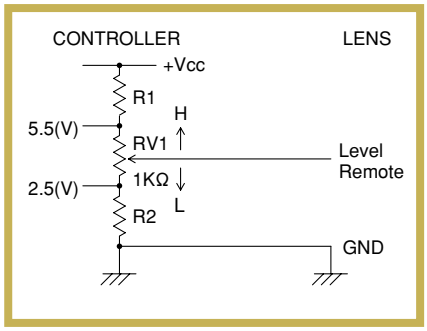
- For details on the operating system, see "MODEL EXPLANATION"
- "Independent mode" and "Common mode" can be selected with the control switch on the lenses. For details, see the control mode in the respective lenses specifications.

Operation system - Iris Remote

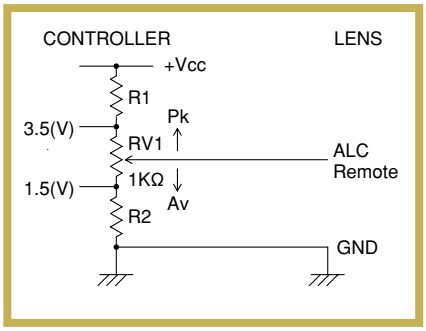
MANUAL REMOTE



LEVEL REMOTE

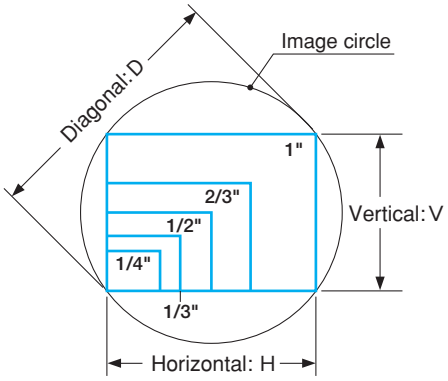


ALC REMOTE



Terminology

Image Sizes



There are several types of imaging sensors for CCTV cameras, with different image sizes.
The aspect ratio of CCTV camera is normally 4:3 (H:V).

Product symbol	Image sensor	Image size (mm)		
		Horizontal:H	Vertical:V	Diagonal:D
C	1″	12.8	9.6	16.0
H	2/3″	8.8	6.6	11.0
D, S	1/2″	6.4	4.8	8.0
Y, T	1/3″	4.8	3.6	6.0
Q	1/4″	3.6	2.7	4.5
35mm camera lens (Reference)	35mm Film	36.0	24.0	43.3

C/CS-Mount

CCTV cameras have either C-mount or CS-mount.

Standard

	C-mount	CS-mount
Flange back focal length (mm)	17.526 *1	12.5 *1
Diameter of screw thread (mm)	1-32UNF	

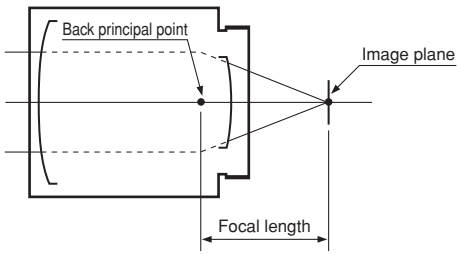
Interchangeability

	C-mount camera	CS-mount camera
C-mount lens	○	○*2
CS-mount lens	×	○

*1 Length in air
*2 Will need a C-mount adapter ring (5mm) when fitting a C-mount lens to a CS-mount camera.

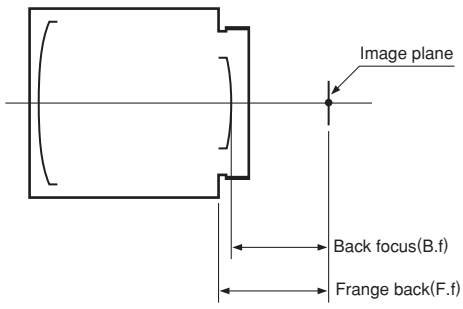
Focal Length

The focal length will be the distance from the back principal point to the image plane.
Lower the focal length wider the image.



Flange Back and Back Focal Distance

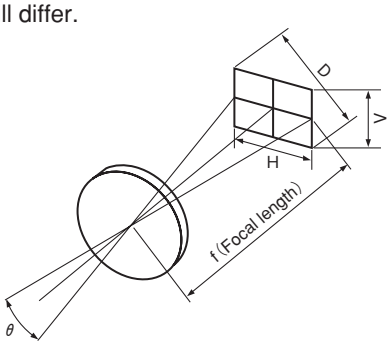
Flange back will be the distance between the mechanical mount surface and image plane.
Back focal distance will be the distance between the rear end of the lens part to the image plane.



Terminology

Angle of View

The angle of view is the object size that can be captured at a specified image size, which is represented by angular measure. Normally the angle of view is measured assuming a lens is focused at infinity. When using a lens of the same focal length with a different image size, the angle of view will differ.



$$\theta = 2\tan^{-1}\frac{Y'}{2f}$$

θ : Angle of view
Y' : Image size
f : Focal length

Example

The angle of view when the camera size is 1/2" and the focal length is 12.5mm:

Y' : 6.4
f : 12.5

$$\theta = 2\tan^{-1}\frac{6.4}{2\times 12.5} = 28.72^{\circ}$$

Brightness of a Lens (F and T No.)

The F No. is an indication of the brightness of lens. The smaller the value, the brighter the image produced by the lens. The F No. is inversely proportional to the effective diameter of the lens and directly proportional to the focal length.

The scale on the iris ring of lens uses a ratio of 2, because the value of light incident on a lens is proportional to the cross section of luminous flux (square of diameter). In other words, the brightness decreases by half each time the F No. is increased by one F stop.
The F No. is a value determined on the assumption that the transmittance of the lens is 100%. Virtually all lenses however, have different spectral transmittance, and thus, the same F No. can have different levels of brightness. To eliminate this inconvenience, a system has been developed to consider both F No. and spectral transmittance, the T No.. The T No. and the F No. are related to each other as shown in Right:

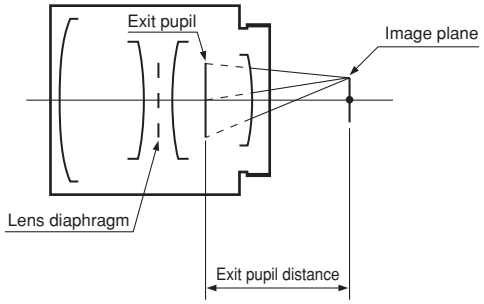
$$\text{F No.} = \frac{f}{d}$$

f : Focal length of a lens
d : Effective diameter of a lens

$$\text{T No.} = \frac{\text{F No.}}{\sqrt{\text{Transmittance (\%)}}} \times 10$$

Exit Pupil Position

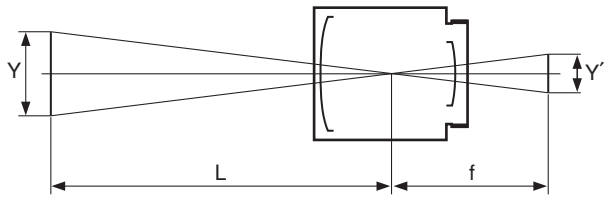
The exit pupil is the image (virtual image) reflected by the lens located at the back of the lens diaphragm. The exit pupil position is generally represented with the distance between the image plane and the exit pupil. "- (minus)" indicates closer to the object, and "+ (plus)" toward the camera.



M.O.D.

The M.O.D. (minimum object distance) is the closest distance to the object at which a image can be taken. This is the distance from the vertec of the front lens.

Field of View and Focal Length



Y ：Object size
Y' ：Image size
L ：Object distance
f ：Focal length

(1) How to calculate the field of view

If the distance to the object is finite, you can use the following formula to calculate the field of view.

$$Y = Y' \cdot \frac{L}{f}$$

Example: 1/3" CCD camera with an 8mm lens is used, and the distance to the object is 3m. The maximum horizontal width as viewed on the monitor can be calculated as follows.

Y' : 4.8
L : 3000
f : 8

$$Y = 4.8 \times \frac{3000}{8} = 1800 \rightarrow \text{Horizontal width } 1.8\text{m}$$

(2) How to calculate focal length

If the distance to the object is finite, you can use the following formula to calculate the focal length.

$$f = Y' \cdot \frac{L}{Y}$$

Example: a 1/3" CCD camera is used, and the distance to the object is 3m and the horizontal width of the object is 2m. The focal length to capture the complete object size can be calculated as follows.

Y' : 4.8
L : 3000
Y : 2000

$$f = 4.8 \times \frac{3000}{2000} = 7.2 \rightarrow \text{Focal length approx.7mm}$$

Depth of Field

When focusing on a certain area in front of and behind the deep object appears in focus. This area is called the depth of field. This is because the focus appears sharp if the focus misalignment is under a certain volume. This certain volume is called the permissible circle of confusion.

The depth of field has following properties.

1) The larger the F No. is, the wider the depth of field becomes.
2) The shorter the focal length is, the wider the depth of field becomes.
3) The longer the distance to the object is, the wider depth of field becomes.
4) The backward depth of field is wider than the forward depth of field.

Image sensor	Permissible circle of confusion (mm)
1"	0.03
2/3"	0.021
1/2"	0.015
1/3"	0.011
1/4"	0.008

The depth of field can be calculated by the following formula.

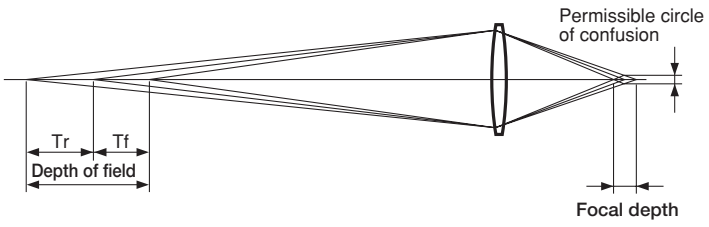
Backward depth of field $Tr = \frac{\delta \cdot F \cdot L^2}{f^2 - \delta \cdot F \cdot L}$

Forward depth of field $Tf = \frac{\delta \cdot F \cdot L^2}{f^2 + \delta \cdot F \cdot L}$

Depth of field $= Tr + Tf$

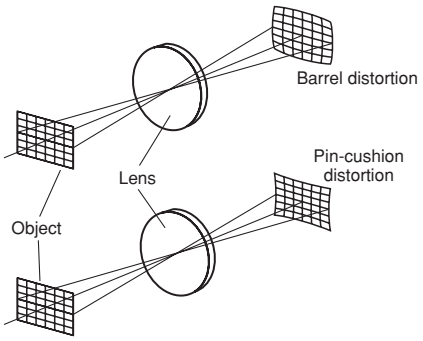
Focal depth $= 2\delta \cdot F$

f : Focal distance
F : F No.
δ : Permissible circle diameter of confusion
L : Object distance



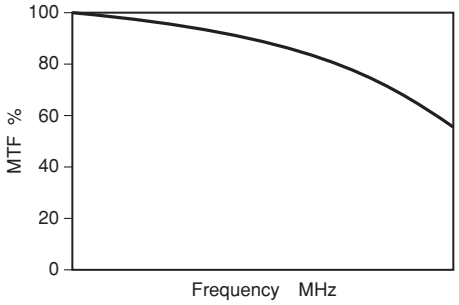
Distortion

Distortion is an aberration where the geometric figure of the object is not reproduced faithfully at the image plane. It is normally represented by the level shift of an image point from its ideal position by a percentage of image height or width.



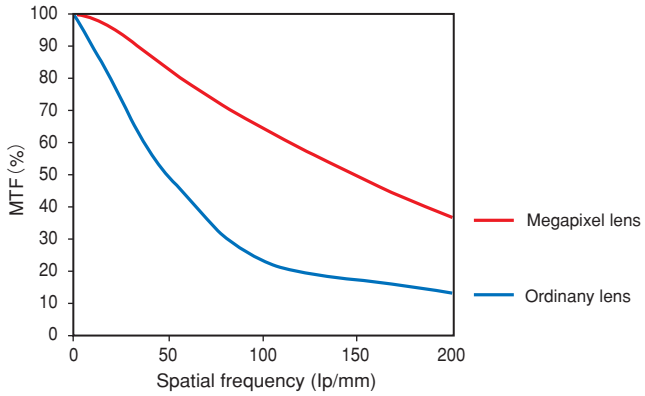
MTF (Modulation Transfer Function)

MTF (Modulation Transfer Function) represents the declining contrast rate when shooting a chart consisted of black and white lines.



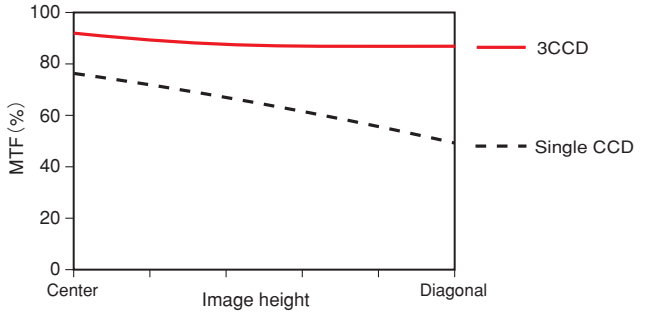
Megapixel Supporting Lens

We have realized a high resolution, compact, and lightweight lens supporting to megapixel by thoroughly reducing aberrations based on design technology cultivated from broadcast TV lenses.
The chart shown at the right compares megapixel supporting lens and the MTF of an ordinary CCTV lens. As the number of TV lines increases, the disparity in MTF becomes bigger.



3CCD Camera Lens

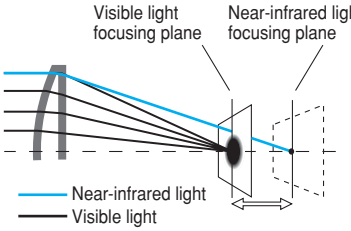
3CCD cameras have thicker glass between the lens and the CCD than single CCD cameras because they have three CCDs to correspond with the red, blue and green colors separated in the prism. Fujinon 3CCD lenses are designed to optimally match with 3CCD cameras. The chart shown at the right explains the difference in MTF when a 3CCD lens and a single CCD lens is mounted on a 3CCD camera.



Day&Night Lens

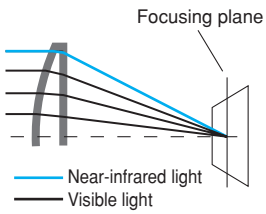
The day&night lens uses an advanced optical design, special optical glass, and other state-of-the-art technologies to focus light (visible to near-infrared 400-1000nm) on the same plane to prevent the focus to become blurry enabling sharp images.

■ A standard lens (for visible light)
is mounted on a day&night camera, and used under near-infrared light.



Result: Blurry image

■ A day&night lens
is mounted on a day&night camera, and used under near-infrared light.



Result: Clear image without getting blurry

Ver.5.3

CCTV LENS

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